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EDUCATIONAL
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THE CANADA
EDUCATIONAL MONTHLY.

JANUARY, 1902.

THE EVOLUTION OF CANADA.*

By the Rev. Armstrong Black, D.D.

On this day of general thanksgiving we shall take one short pointed sentence out of the Old Testament, which we should like to fasten as a nail in a sure place in memory. That sentence is found in Leviticus, 22 : 23, and contains this sharp claim on the part of God, "The land is mine." The words are abrupt and emphatic, and their demand sheer and decisive. They leave no room for parley or question of any kind. There may be subsequent arrangements about life, rights and tenure, and about the letting of it out generally, but this fact is primary and essential, and the basis of all conditions—The Land is Mine.

The bystander is said to see most of the game; the man who is not in it, the most of the battle. If I may be allowed to say one word of only personal reference and moment, I would say that, with something of the open-eyed interest and surprise of an outsid-

er, I have been awhile in Canada and amongst her people; I have crossed the land from sea to sea and have intently watched the nation and its ways. And I am clear to confess a strong conviction that since time began a greater trust was never committed to a capable people than that which has been put into the hands of Canada by God. The trust is vast, and the times for executing it are ripe. At the beginning of a century, throbbing with a life of splendid purpose and enterprise, this vast Dominion, much of it not even explored yet, is put for possession first, and for shaping and making afterwards, into the power of a handful of people. A handful of people, we say, for Canada will not be populated until her inhabitants are increased sevenfold or tenfold, and even at that she will not be populous. The last great open area of the wide world, rich in all that human life demands for sustenance and comfort, is thus in your hands to-day. No enemy is there to dispossess; no deep-root-

*Thanksgiving Discourse, Saint Andrew's Church, 28th Nov. 1901.

ed prejudices to be overcome; all the frontiers are kept and all the international burden borne by another power; the climatic conditions are not invincible nor at their worst much more than stimulating; everything is here which even a crowded Europe might need, and God's word more free and unfettered was never spoken to any people. Behold the land! and possess it in the length and in the breadth of it!

They who are expert in reading history and its signs, say that Canada's tide is now at the flood, and that her present opportunity is unique. Twenty-five years ago it was not so; twenty-five years hence things will not be as now. And just at this juncture everything depends upon the faithfulness of the average man in this large room in the house of human life. Every citizen has a stake and can make his own contribution to his nation's future and through that to the world's. Not one good reason can be adduced why Canada should not be the most sane and just and most nobly free nation the world has ever seen. The arena is wide open, the conditions are kindly and peaceful, and thus far the people are entirely within righteous control. A hundred warning examples of what neglected duty in citizenship leads to, lie behind us; and a thousand noble incentives to faithfulness lie before us. Quite recent experiments across the line, as well as the remoter experiments recorded in all history, are available to show us how best to use this illimitable heritage; and a more distinct and serious issue never

was set before any people as to whether they will betray or fulfil the principles of Christ's Kingdom on earth. In this connection, and under the headline of a text of Holy Scripture, "let me say once more on this day of reverent gratitude and adoration, for I can never say it once too often, that the gift of Canaan to Israel of old will rank as a very small thing in human history, compared with this gift of Canada to us; and I would charge with highest responsibility every man who calls this land his home and shares its privileges—whether it be the land of his birth or his adoption. Every year God is proving us as He proved Israel, whether we will obey and serve or not; thus far, in His great mercy, He has been proving us only by His goodness, not by His judgments.

How great has been His goodness; how unparalleled His gifts to us in the past summer and autumn! I saw your Western wheat fields ripening; I saw them gathering their golden harvest—the bushel to the acre amazing the oldest husbandman, and the endless acreage making the whole world wonder. One hour of untimely frost from the unseen and far away where God alone controls, and all might have been sadly different! But God remembered us with favor, and now not only are our own barns full against the winter, but the life of other lands is secured against the months of dearth, because Canada is their granary. Surely we are but feebly acknowledging so great kindness and mercy, when we laud and magnify the Lord of the harvest in His own house now!

Surely we shall remember and live worthy of our high and distinctive calling as a nation! Surely we shall try and fulfil the terms and conditions of worthy tenure in this wide and goodly land—the old terms of Israel's tenancy of Canaan, not abrogated, but written out anew and sealed afresh in the gospel of Jesus Christ for every individual. And surely, too, we shall try and aid, by our faith and our prayers and the supply of that which is spiritually lacking, the pioneer men who have still those limitless reaches of prairie and mountain and wood to dress and subdue; and not allow the land, which is God's, to slip into other hands — the hands of the loveless and the lawless, whom God hath not chosen! The land is God's; the land is ours. He hath given it to us and to our children for ever, if we are faithful and true to our trust and keep His covenant of righteousness and love.

To the above eloquent appreciation of the future of Canada by Dr. Black, we take the liberty of adding two extracts from addresses by the eminent statesman, Lord Dufferin delivered while he was Governor General of Canada in 1872-78.

“Few people in this country have any notion how blessed by nature is the Canadian soil. The beauty, majesty, and the material importance of the Gulf of the St. Lawrence is indeed the theme of every traveller, while the stupendous chain of lakes to which it is an outlet is well known to afford a system of inland navigation such as

is to be found in no other part of the habitable globe. The inexhaustible harvest of its seas annually gathered by its hardy maritime population, the innumerable treasures of its forests, are known to all; but what is not so generally understood is that beyond the present inhabitable regions of the country—beyond the towns, the lakes, the woods—there stretches out an enormous breadth of rich, alluvial soil, comprising an area of thousands of square miles, so level, so fertile, so ripe for cultivation, so profusely watered, and intersected by enormous navigable rivers, with so exceptionally mild a climate, as to be destined at no distant time to be occupied by millions of our prosperous fellow-subjects, and to become a central granary for the adjoining continents. Such a scene as this may well fire the most sluggish imagination, nor can there be conceived a greater privilege than to be permitted to watch over the development of an industry and civilization fraught with such universal advantage to the human race. In fact, it may be doubted whether the inhabitants of the Dominion themselves are as yet fully awake to the magnificent destiny in store for them, or have altogether realized the promise of their young and hardy nationality. Like a virgin goddess in a primæval world Canada still walks in unconscious beauty among her golden woods and by the margins of her trackless streams, catching but broken glances of her radiant majesty as mirrored on their surface, and scarcely recks as yet of the glories awaiting her in the Olympus of nations.”

“Increased facilities of intercourse, the multiplicity of enduring domestic ties which have been created by, and are maintained between, thousands and thousands of families at home, and their emigrant relations abroad; the proximity between England and her most distant settlement, effected by constantly improving means of transit, have unified and compacted the colonial system, and, as a consequence, instead of concentrating his attention upon his home-farm alone, John Bull is learning every day to appreciate more keenly the splendor and importance of his Imperial estates. I have always believed in our colonial future; and my official experience has confirmed my conviction that if England would only be true to herself, and to those she has sent forth to establish the language, the law, the liberties, the manfulness, the domestic peace of Britain over the world's surface; if she will but countenance and encourage them in maintaining their birthright as her sons; if she will

only treat them in an affectionate and sympathetic spirit; this famous Empire of ours, which is constantly asserting itself with accumulating vigor, in either hemisphere, and in every cline, will find the associated realms which compose it, daily growing more disposed to recognize their unity, to take a pride in their common origin and antecedents, to draw more closely together the bonds which bind them to each other and to the Mother country, to oppose in calamity and danger a still more solid front to every foe, and to preserve sacred and intact in every quarter of the Globe, with an ever deepening conviction of their superiority, the principles of that well-balanced monarchical constitution which the past experience and the current experiments of mankind prove to be the best fitted to secure well-ordered personal liberty and true parliamentary government.”

Extracts from *Britain Over the Sea*, compiled and edited by Elizabeth Lee. pp. 24-25 and 45-46 of Introduction.

PRESENT TENDENCIES IN SECONDARY EDUCATION.

Prof. Elmer Ellsworth Brown.

We have been considering thus far the secondary school in the light of the doctrine that the school is life. It has necessarily been a hasty view. Some of the most significant and far-reaching consequences of that doctrine have not been touched. But we hasten on to another view, which has been foreshadowed and is not altogether another. Our adolescent student

is continually reaching out after larger conceptions of duty and opportunity. With him, one wave of subjective egoism is succeeded by a wave of devotion to larger human interests. He may be as much an egoist as ever when he contemplates the glory of self-sacrifice for the good of one's fellow-men, but his egoism is then finding its own corrective. In like

manner, we turn now to the broad question of the relation of secondary education to public interests, but with no sense of breaking with the doctrine we have been considering.

One of the most notable of recent writers on the subject of secondary education is the French sociologist and philosopher, M. Alfred Fouillee. Within the past two years, he has made important contributions to the current discussion of the reform of secondary education in France. But his general position was set forth with great clearness, ten years ago, in his book entitled *Education from a National Standpoint*. This work deals, you will remember, with the schools of France. We need a full discussion of American education from the national standpoint, or rather, from the public standpoint, which includes the national. Doubtless some one will give us such work in due time. But in this latter half of my paper, I wish to point out some current tendencies as seen from the standpoint of public interests.

The spirit of democracy is abroad in modern societies, whatever their form of government. Rightly understood, it is one of the choicest possessions of our modern civilization. So one of the next searching tests of any educational tendency is its bearing upon essential democracy.

By essential democracy, I understand the spirit which values men according to their manhood. It is the spirit which judges of men on the ground of inherent worth, and not on the ground of such fortuitous attributes as birth or wealth or mere reputation. Democracy

surely recognizes differences among men. It sees that some must lead and some must follow. Its peculiarity is that it seeks by all means to devolve leadership on him who is fittest to lead.

More than this, true democracy recognizes in men a diversity of gifts, such that each man is destined to lead in some things and to follow in others, to lead in some relations in life and to follow in other relations. That is, to lead wisely and to follow wisely are the correlated duties of every man in a democratic society. Democracy in the long run puts the highest price on preeminence in each of the several walks of life. It puts a price on preeminence of every sort, and teaches every man to respect the different capacities of other men. The question, then, to put to our institutions of secondary education is this: Do they help every student to find himself and his fellowmen? For a portion of its students, secondary education may share this responsibility with the education of the higher schools. But the responsibility falls upon the secondary school in a peculiar way, for a reason that this grade of instruction deals with a stage of development in which the student is for the first time, as it were, in possession of his complete equipment of instincts, powers, and passions, and is, accordingly, for the first time fairly face to face with his destiny.

I. Now let us attempt to trace some bearings of this view upon current tendencies in our secondary education. In the first place, what are secondary schools doing, and what can they do, to maintain and advance the spirit of true de-

mocracy? I do not see that this question has much to do with the question of social "sets" and all that sort of thing. It is rather a question whether the youth in our schools are learning to value human worth for what it is, and not what it has, and are learning that they are responsible, each for a social service peculiarly his own. Diversity of education is not necessarily a bar to such instruction; but every sort of educational snobishness is its deadly enemy.

The public high school has long been regarded as one of the bulwarks of our democracy.¹ But with the great increase of wealth in recent years there has grown up a new and very strong demand for private schools. Some of the grounds of such a demand have been previously considered. The growth of private fortunes has simply made it possible for a large number of families to follow their own preferences in this matter. But this is not all. There has been another ground for this demand, and that has been the desire for social exclusiveness. It was to be expected that schools would be opened which would meet these several requirements; and not a few of those which have come into existence are such as would satisfy fastidious tastes in their material equipment and the general excellence of their management.

With these well-known facts in mind, it is a surprise to learn from the statistics compiled by the Bureau of Education that this movement toward private education has not yet begun to compete to any marked degree with the public high-school movement. Up to the eighties of the nineteenth century, less than half of the se-

condary school students in the United States were in public high schools. Within that decade the proportion was reversed. In the year 1889-90, the public high schools contained more than two thirds of our secondary school students; and this proportion has increased every year since that time, so far as the reports have been published. The City of New York has made a wonderful contribution to this increase. What is still more noteworthy, since the year 1893-4, the percentage of our whole population attending private secondary schools, and even the total number of students in attendance on such schools, has actually been going backward.

It is hardly to be expected that this state of things will last; but so far as the tendency of the immediate present is concerned, it is clear that public secondary education is very far in the ascendancy and still on the gain.

In the main, I think we may safely assume that public high schools are democratic in tone, and serve to reinforce the democratic spirit in our society. But we must not carry this assumption too far. There is need, even in public schools, to guard against the subtle danger of valuing men for something other than what they are. It would be a very great mistake, too, to assume that the tendency of private schools is mainly or even largely undemocratic. I do not think that such is the case. A large and well established academy certainly seems to have a democracy of its own, which imposes a wholesome check on some forms of exclusiveness.

There is constant need, however,

to guard, in private schools and in all schools for that matter, against the danger of artificial standards. Especially do the teachers of private schools which have a reputation for exclusiveness need to guard their students against this danger. There can be no doubt that many such teachers are faithful to a high degree in this matter. And the reward for their faithfulness is this: the knowledge that they are not only promoting the moral uplift of their own students, but are also serving important public ends. I believe there are families whose only chance of getting a breath of real, American, democratic air is the training the youth of those families get in schools that educate.

2. M. Fouillee, in the work referred to, contended that the "selection of superiorities" is one chief form of service which the school must render the state. The saying may be accepted with all heartiness. Just because democracy is so easily perverted into a system of "leveling down," the schools need by all means to keep faith with its true spirit, and seek for latent leadership as for hid treasure. As our schools grow in numbers, it becomes increasingly difficult to give special stimulus to those of more than ordinary endowment, that they may make the most of the gift that is in them. The chief gain that we are making in this respect is not in any improvement in system, but rather in the more general employment in the schools of teachers of thorough preparation, who are capable of making their instruction generally stimulating.

But democracy does more than demand that the schools shall find

and develop natural leaders. It demands that the schools shall find and develop in each pupil his peculiar side of leadership. This is even more difficult than the other. Here, again, the growth of our schools is a hindrance to their efficiency. Here comes in new emphasis on the responsibility of the principals of schools. Here, too, we find some of the good effects of the movement toward the freer election of studies. It has been suggested that the secondary school course be so arranged that at the close of each two-year period the student be allowed to make a new election, but that within this period his course be relatively unchangeable. There seems to be wisdom in this recommendation. It amounts to this, that at a given time a two-year course be mapped out in accordance with the best knowledge then available as to the student's quality and capability, that he be kept at this course long enough to show whether the choice was a good one for him or not, and that at the end of this period choice be made for the ensuing two years in the light of the experience of the past. This would make the course of training a continued trial of the student's quality, with a view to finding his best. And that, I think, is what every secondary course should be. By such means we might save many misfits in life, without running into those endless term-to-term readjustments which only render a course of instruction jerky and generally hysterical. It is something like this that the Germans are trying to do under the Frankfort plan, only that plan provides for three-year period instead of two. The fact that this

tendency is international emphasizes its importance. It is, in truth, the current form of the demand that secondary education shall help the student to find himself. The demand has come from the psychological side of education. It comes now from the national side.

Such a system as this could be made much more effective in a six-year or an eight-year high school than in our ordinary four-year schools. The tendency toward an extension of the secondary course upward and downward can barely be referred to here for lack of time. It is as yet more a tendency of thought than of practice. Yet we see some signs of its finding its way down to the ground. It seems not unlikely that we shall have, side by side with our present system, numerous experiments with secondary schools which take in the last year or two of the present elementary course, and with the same or other schools so organized as to cover the first two years of the present college course. It is very desirable that such experiments be made. In the making of such experiments, it would seem possible for private schools to render one important service to our secondary education. And we can be content to let the matter work itself out under the wisdom taught by experience.

But there is another tendency of large significance, which has to do with the effort to find for every citizen his place of most effective service. I refer to the movement which is giving us vocational schools of secondary grade.

We seem to be coming to a more general and insistent demand that

men shall have training for their work in life. Since the breaking down of the old order of trade guilds and apprenticeship, the need of regular training has long been observed. There is an American notion of long standing which has added to this obscurity. The notion that special training for any particular service is a reflection on the brightness of the person trained. If he had gumption, he would be able to do his work without having to learn how to do it. This does not seem to have been the colonial view, but it grew up rather in the earlier part of the nineteenth century. Training of the highest sort is now provided in the professions, particularly in medicine. Teaching still lags in this respect, but is trying to catch up. The several forms of engineering are already firmly placed on the platform of technical training. As regards the trades, progress has been slow, but progress has surely been making. The idea of specific training has reappeared in a different world from that of the trade guilds, with their system of apprenticeship. It is a world of schools. When this age undertakes to rebuild the old, mediaeval idea that each man shall be master of his own craft, it will do it through a system of trade schools. In fact, this seems to be what we are coming to: A view of public education which plans to make the schooling of every pupil culminate in training for some occupation in life. We will say to our youth: "You have left school before school is out if you have not learned in school to do your daily work."

Such vocational training is to be postponed as far as possible. It

is to rest upon the most extended general schooling which the individual can get, but it is to be the rounding out, the flower and fruit of the general schooling of all. More than this, the two types of education are not to be sharply distinguished one from another. They are to shade into each other, each is to reinforce the other. The idea of useful occupation will ennoble the more general instruction of the lower schools, and the ideas of liberal education will ennoble the school of trades. The future artisan will be encouraged to be as much of an artist as he can be. Such is my dream. If some of it sounds like what Ruskin or William Morris dreamed a half a century ago, I do not know that it is any worse for that.

This tendency, I think, is already upon us, and it seems reasonable to believe that the enormous expansion of high-school attendance in this country of late, with the attendant effort of the schools to meet the needs of all, is in part a gathering up of the forces of our American youth preparatory to a more general mastery of the daily business of life.

The growth of secondary schools of a technical and commercial sort is bringing with it a new set of problems. We must not stop to consider them here. Within the next few years the discussion of them will very likely fill a large place on the programme of your annual convocation.

Two principles I have tried to set forth which I should like now to recapitulate side by side. First, the general culture of secondary grade, which is needed for life, is practically identical with that which

best fits for the higher education. Secondary, the final stage in the schooling of every individual should not be of the nature of general culture, but it should be instead a direct preparation for a particular vocation in life. I take it that these are two of the principles which will influence our secondary education within the next few years. Neither of them can be accepted as final. They are working hypotheses, subject to correction as we go along.

3. Our secondary education, then, is meeting a public need in the promotion of real democracy, and in helping individuals to find their field of most effective service. In the third place it is meeting a public need in the largest sense by promoting a wholesome civic spirit. Those who are experimenting with schemes for self-government in high schools are aiming, through other things, to create an intelligent interest in municipal affairs. The study of American history and civil government is taking a larger place in the high-school curriculum. The neglect of these subjects in the past has been one of the most striking anomalies in our courses of instruction. American literature is also receiving ample attention in both elementary and secondary schools.

The emphasis thus laid on the national spirit in our schools is not peculiar to this country. It is characteristic of our time to say that. The tendency which it represents calls for strong approval. I trust I shall not be misunderstood when I add that local or even national spirit cannot be regarded as the final and absolute end of our education. We have been living in an

age when nationality is seen as the ultimate object of patriotism. But that age is passing. The strenuous effort of the German Empire to make the German Gymnasium more intensely national is only one indication of this fact. It can hardly be doubted that we are moving towards a time when our country will be the world, and patriotism will mean devotion to the interests of mankind. The growing importance of international law, the advance of international co-operation, the gradual unification of the ideas of civilization, and a hundred other indications point in this direction. It is no utopian view that I would present. The progress I speak of is slow, but it has been mightily accelerated within the memory of living men. The time to live and die for one's country is not past, it will not pass in our day, but just as surely as in times gone by the voice of patriotism has called men to fight for their nation as opposed to a rebellious section just as surely a time will come when the voice of patriotism will call on men to fight for humanity as opposed to any nation that rebels against the general interests of humanity.

Our highest aspiration for our country is not that it shall overcome others—that it shall make itself the biggest nation among a crowd of envious lesser nations—but rather that it shall contribute most to the realization of that higher "federation of the world."

So the tendency of our secondary education which will in the end promote the truest patriotism, is the tendency to look to the highest good of all mankind. This is only another way of saying that as our schools grow more national

they should also grow more truly humanistic. The older humanism was devotion to an ideal, to be sure, but an abstract ideal. The newer humanism of the schools cannot well dispense with the best that the older humanism had to offer. But it will cease to be abstract. It will call forth a spirit of devotion, not to an ideal republic of the past, but to the commonwealth of the present and the greater commonwealth of the future.

The youth in our secondary schools are ready to be swayed toward either sordid selfishness or the most generous self-devotion. The best that the schools can do to guard them against self-centered commercialism, is to awaken their enthusiasm for some ideal good, which has power of appeal to their imagination. Literature and history can make such appeal, by awakening the sentiment of patriotism. And they will make this appeal at its best when they give our youth some glimpses of the larger patriotism, of the universal good, which we hope to see our country serving in the days that are to come, as no nation has served it since the nations began to be.

So I look to see humanism as dominant in the schools of the twentieth century as it was in those of the sixteenth; but a new humanism, leaning hard on science, mindful of the past, patriotic in the present, and looking hopefully forward to the larger human interests that have already begun to be.

I am deeply conscious, ladies and gentlemen, that I have failed to present any adequate treatment of the great theme which you as-

signed to me. Many aspects of the subject which will seem to some of you of paramount importance, I have had to pass without discussion or even without mention. I have tried to lay stress on some of the chief tendencies, already observable, which offer good hope for the future. Broadly speaking, the dominant movements seem to me to appear in the effort to put life, real life, fullness of life into the school; and in the effort to make the school minister in the largest sense to the public good. These efforts tend, for one thing, toward greater flexibility in our courses of study, but also toward something more than flexibility. Our boys and girls belong to the highest form of life, and it is a vertebrate course of study that they require.

They tend to emphasize the importance of making and discovering real teachers. President Wheeler, whom you sent to us in California, much to our gain, has said, "I am convinced that teachers are not exclusively born." We have only to add that teachers, both born and made, must needs be discovered.

These efforts tend further toward co-operation and division of labor between public and private secondary schools, in meeting somewhat of the religious need of adolescents; and in promoting that sort of democracy which knows that

A man's a man for a' that.

They bend toward the practical recognition of the doctrine, to every man his work and preparation to do his work.

They tend toward nationalism which is not the nationalism of, "My country, right or wrong," but the nationalism of, "My country

for the enlightenment of the world."

The consideration of tendencies in secondary education just now brings us near to the very heart of our civilization. For the past decade we have seen secondary school problems occupying a central place in the thought of the great culture nations. It has been a decade of secondary school reforms. The great milestones in the progress of these reforms have been the December Conference at Berlin in 1890, and the revision of Prussian curricula which followed; the report of our Committee of Ten in 1894; the report of the English Parliamentary Commission on Secondary Education in 1895; and the establishment of the English Board of Education to give effect to recommendations which this commission presented; the report of the Committee on College-Entrance Requirements, of our National Educational Association, in 1899; the report, in 1899 and 1900, of the commission appointed by the French Chamber of Deputies; the Brunswick Declaration of 1900; and the other important acts and expressions growing out of the so-called Frankfort Plan. It is a most remarkable ten-year record, and warrants the belief that we have just been passing through one of the greatest formative epochs in the history of secondary schools. In America it has been, not a time of crisis, as in the nations of Europe, but rather a time of unparalleled progress. In 1888-9 one third of 4 per cent. of our population was enrolled in our secondary schools; in 1888-9 nearly four fifths of 1 per cent. was so enrolled, and in eighteen states

this proportion was more than 1 per cent. If the figures at hand are correct, this is by far the largest proportion of any great people to be found pursuing studies of this grade, Prussia showing a little less than one half of 1 per cent. and France a trifle less than Prussia.

It is the public high schools that have done it. Their attendance increased, in the period named, nearly 214 per cent., while all other secondary schools gained less than 9 per cent. It is evident that the high school has come to be a highly significant factor in our American life; raising our standard of living; giving currency to higher ideas and ideals; sending great numbers of our young people on to the universities and so accentuating in our age the character of the university age; increasing the range of selection in all occupations calling for the intermediate and higher grades of intelligence; forcing the wider differentiation of our courses of instruction by the very immensity and variety of the demands for instruction which must be satisfied.

It becomes in an important sense the mission of our secondary schools to help our people of all social and industrial grades and classes to understand one another; for they help the schools of all kinds and grades to understand one another. Especially is this true of the public high school, which lays, as it were, its hand directly upon both the primary schools and the universities.

It is a great thing, this promoting of a good understanding between all classes of our citizens. There will be times of crisis when

it will be a paramount concern in our national life. We can view with patience even the bungling work occasionally done by politically-minded school boards in dealing with our high schools, when we realize that in just this way our demos is working toward an understanding of an institution, which in many lands the demos neither tries nor cares to understand. Even though temporary mismanagement of our higher educational institutions our people are coming to understand one another. And through better management they are coming to a better understanding.

It takes wisdom and patience and poise and unbounded good-will to discharge the responsibilities of an intermediary position such as is occupied by our secondary schools. But, if these graces shall be in you and abound, teachers and managers of such schools, you shall deserve well of our country; and even though we be a democracy, we shall not be wholly ungrateful.

President William McKinley, of Ohio, was shot in the stomach at the Pan-American Exposition in Buffalo, Friday, Sept. 6th, by Leon F. Czolgosz, an anarchist. After lingering a week, the President died at 2.15 o'clock Saturday, Sept 14th, at the house of John G. Milburn, Buffalo. On the death of Mr. McKinley, Vice-President Theodore Roosevelt of New York, become President. Mr. McKinley was 58 years of age. After a state funeral at Washington, the remains were taken to Canton, O., for interment.—Assassin executed October 28.

THE FISHERIES.

The beautiful harbor of Gloucester, the largest fishing port of the United States, stretches from Norman's Woe to Eastern Point on the Massachusetts coast. Every year in January a fleet of fishing vessels sail out from there to Placentia Bay, Newfoundland, to load with the bait fishes that are used in deep-sea fishing. That marks the beginning of the fishing season on the Grand Banks.

Nearly 7,000 men are in the fishing fleet. For three long months their vessels will be anchored each in its solitary berth on the Banks, hundreds of miles from land. From daybreak till dark the sturdy, storm-tossed fishermen ply their lines from the decks or go in their little cockleshell boats to overhaul the trawlines, and if a storm comes up or the thick fog closes in they may never return to the ships. Daily and hourly they face the perils of the sea and fight the wind and the tide that they might earn their scant living and give the markets the usual supply of sea food.

The highest type of seamanship is attained among American fishermen; and of these the Gloucester men are said to take the greatest chances, encounter the heaviest seas, venture the densest fogs, and endure the greatest cold—all in the smallest craft. Every year fifteen vessels, on an average, are lost at the Banks. The Gloucester wives put lights in their windows each night, for no one knows when a vessel may return. Then when one comes creeping into the bay with its flag at half-mast, the Gloucester women with white faces

must wait while the five little dories slowly tow the trawler in before they may know from whom the hungry sea has demanded its awful tribute.

The annual yield of fisheries to the United States is \$40,000,000. The fishing industries are mainly near the coasts of the cooler northern seas. The largest sea fisheries are those of the Atlantic coasts of the United States, with the neighboring coasts of Canada and Newfoundland, and those of Western Europe.

(We do not think the figures of 10,000 men and value \$20,000,000 are correct. That would be \$20.00 each man—small income—On the Canadian side 2,300 men have a catch valued at over \$2,000,000, an average of about \$1,000 each—much more likely.)

The cod is commercially the most important of fishes. The largest annual value of the cod catch is Newfoundland's, \$5,000,000. Canada comes next, about four millions, and then that of the United States, nearly three million. The largest cod fisheries in the world are on the Grand Banks of Newfoundland. Under the waters of the Atlantic just south of the island is a long chain of mountainous elevations—275 miles north and south, and 350 miles east and west—which form what are known as the "Banks." This comparatively shallow water is rich in fish food, and the codfish, herring and halibut go there by the millions to feed. The shallowness of the water and the strong tides that

sweep with almost resistless force along the chain of subterranean mountains are a great source of danger to the daring fishermen.

Each nation, by international agreement, reserves for its own fishermen all fishing rights in the sea within three miles of its coast; outside of this limit the sea fisheries are open to the world. The Grand Banks are outside the three-mile limit, and fishermen come by the hundreds from as far away as France.

The fish on the Banks are taken by hand-lines cast over the sides of the vessels, or by trawls. In trawling a stout line is paid out from a vessel across a tidal current, anchored and buoyed at intervals, and having hanging from it at short distances lines bearing baited hooks that reach down perhaps half a mile. When all these trawl lines are out from a vessel, a fisherman may have to go eight or ten miles away from the vessel to tend the trawls. He goes in a small boat, removes the fish and rebaits the hooks. The bait used in fishing is herring and other small fish found only in the coast waters of Newfoundland, and to a very trifling extent, of Canada. The bait fisheries are within the three-mile limit, and, therefore, are not free to other fishermen. Out of this fact has grown the Atlantic coast fisheries difficulty between the United States, Canada, and Newfoundland, which the interested Governments are trying so hard to settle. The American fishermen must have this bait to carry on their industry. Newfoundland wishes, in return for this concession, free entry for its fish products to our markets. Canada insists, with England's acquies-

cence, on sharing in any such arrangement. This is only a brief statement of the intricate question. At present there is an arrangement by which American fishermen can procure the bait on payment of a license fee. Frenchmen are not allowed access to the bait fisheries and procure their supplies through smuggling.

Newfoundland, Canada, and Norway export great quantities of cod, salted, particularly to the Catholic countries of Southern Europe and Latin America. The fishermen clean and salt the fish right after the catch, and after the return to port they dry them in the sun on platforms. Inshore cod fisheries along New England shores supply most of the fresh cod in the home markets; practically all the cod entering our ports is consumed at home. The liver of the cod yields a valuable medicinal oil.

George's Banks is the scene of Kipling's "Captain Courageous," a book that gives a vivid idea of the dangerous, stirring life of the fishermen on the Banks.

Mackerel and herring are close in shore and fishing for them is not so dangerous. Nets are generally used. The herring is smoked, pickled, or salted. Small herrings, called "sardines," are packed in oil after the manner of the true sardine, one of the most important food fishes of South and Southwest Europe. Our sardines are cheaper than the imported article, which formerly came wholly from France, and three-fourths of our supply is now from Maine.

Within comparatively recent years the shores of the Great Lakes and the Pacific Coast have become a great commercial factor

in the fishing industry of the country.

The Great Lakes fisheries are west of Buffalo. More than 10,000 men are employed and the value of the fisheries is over \$2,000,000. Two-thirds of the catch is whitefish (which is most valued), the so-called herring trout, and sturgeon from which American caviare is made. Caviare is the prepared and salted roe of the sturgeon and its manufacture is a large industry on the Caspian and Black Seas.

(In the Canadian half of the great Lakes of Ontario about 2,300 men are employed, the value of their vessels and boats is over two million dollars, and the value of their catch is over one and a half million dollars annually. About 22,000 pounds of caviare are prepared yearly, one half in the Lake of the Woods, and the other half in Georgian Bay and Lake Erie.)

The most important branch of the Pacific Coast fisheries is the salmon fishing. Most of the salmon is cooked and canned. It is the largest fish export of our country and is sent to all parts of the world. The largest salmon fisheries are in the Columbia and other rivers of the northwest coast of the United States, including Alaska, in the Fraser and other rivers of British Columbia. The canning industry in Alaska is the largest in the world, extending to Behring Sea, and is steadily growing. The fishing season is from about April to August, inclusive. The salmon is caught in seines and traps in the rivers which it ascends to spawn. One Alaskan packing house, which until recently has been the largest in Alaska, discarded the use of seines hauled by

hand, and uses powerful machinery and gear of such stupendous length as to enclose almost a half mile square of water. These immense nets are laid by steam tugs and hauled by steam windlasses on the beach. This wholesale method of catching fish and cutting them off from the spawning ground necessitated the establishment of hatcheries in the place of natural ones. Other companies are also starting hatcheries. The Alaskan output of salmon last year was valued at \$6,219,000.

(The salmon catch of British Columbia was valued at \$4,007,396 in 1899.)

Fisheries of the Gulf and of the interior of the United States are of less commercial importance.

Most of our fishery products are consumed at home. Nearly every coast town is a fish market. The Billingsgate, London, is the largest fish market in the world. No foreign market, however, offers so great a variety as New York, Philadelphia, Boston, and Chicago, which receive and distribute salt and fresh water fish from all the coasts and the Great Lakes. Fresh fish formerly had to be sold as soon as it reached market or it becomes worthless. This waste has been stopped by refrigeration.

Canada's fisheries are among the largest in the world. About 80,000 men are employed in them. The total annual value of the fisheries is about \$22,000,000, half of which is exported. Cod, mackerel, shad, haddock, halibut, and salmon are caught. The basis of Newfoundland's industrial support is catching and curing fish.

In Great Britain and Ireland over 1,108,000 men are engaged in the fishing industries, fish being the

only food product yielded by the country in adequate supply. The sea fisheries are more valuable than in any other country except the United States. Fleets of sail and steam trawlers are sent out, many vessels having tanks in which to keep fish alive till they can reach land. Herring is the great staple of the Scotch fisheries and is the great fish of export, about \$10,000,000 worth a year being pickled and sent to the Greek and Roman Catholic countries of Europe. The annual yield of fisheries in the United Kingdom is \$48,000,000.

In France cod and sardines are the most important fish. Canned sardines are sent all over the world. French rivers which had become almost destitute of fish have been stocked with much American fry. Annual yield of the French fisheries is \$25,000,000.

The fisheries of Sweden and Norway are very important. Three-fourths of the catch is taken along the Norway coast, where cod, mackerel, herring and the so-called anchovy, a variety of herring, are caught in vast numbers. All the ports of Norway are fishing ports, but the greatest fishing centre is the Lofoten Islands, where 40,000 men and 7,000 small vessels are engaged in the busy season. Four-fifths of the cod and herring catch is exported. The total export of fish and fish products in 1899 was over \$12,500,000.

In Japan, whose annual yield of fisheries is \$26,000,000, thousands of tons of dried fish are packed around the roots of tea plants to enrich the soil.

In few countries are fish so important as in Russia, the demand being greatly increased by the numerous fast days. Whale and cod fisheries along the Murman coast are now being developed. The annual yield of the fisheries is \$22,000,000.

How to maintain the stock of food fishes in the open sea is a vastly more important question now than twenty years ago. Recent improvements in fishing methods have increased the catch enormously. The United States Fish Commission is doing valuable work in protecting the industry. International action to make scientific investigations in the interests of the fisheries is being urged. The fishes must eat if we are to eat the fishes; and the currents in the upper layers of the sea that bring the fish food called "plankton" (constituted of microscopic animals and algae) are of such vital importance that the great migrations of the herrings are believed to largely depend upon the quality and quantity of it. The conflict of two great ocean currents (as the Gulf Stream and the Arctic current) often affects the fisheries. Scientific researches on the subject are being made in different countries.—Intelligence, Chicago.

We submit the Article on the Fisheries from the *Intelligence, Chicago*, amended by several important corrections, supplied by our able and courteous Dominion statistician, George Johnson, Ottawa. Our teachers know how to use in the schools information of this description.—Ed.

WHY PUPILS LEAVE THE HIGH SCHOOL WITHOUT GRADUATING.

By Superintendent George E. Gay, Malden, Mass.

At a meeting of the Hampden County Teachers' Association, in Springfield, a few weeks ago, I fell into conversation with a school superintendent, from Connecticut.

"I want to know," said he, "why pupils leave the high school in such numbers without graduating."

"They leave," I replied, "for somewhat the same reason that they leave the grammar schools in the seventh, eighth and ninth grades, and in just about the same proportion."

"Not at all," said my friend, "they leave the grammar schools when they become fourteen years of age, and go to work."

"Yes, and they leave the high schools to go to work."

"Some do, many do not. More should stay and complete the course."

It seemed to me that there was a virgin field for investigation, and I determined to make a beginning in the work of finding the answer to my friend's question. I did this because of the real importance of the question, and because of another reason. There was something in the tone of my friend's voice, possibly there were words also, which made me think he believed that high school principals and high school teachers were sometimes at fault for the annual decimation in our high school ranks. I think that others also believe the high school people are not guiltless in this matter.

I determined, therefore, to try to ascertain from the pupils themselves, the reason which they might give for leaving the public schools of Massachusetts without completing the course of study prescribed for them. I accordingly prepared a circular, * a copy of which is shown on the next page, asking them why their high school career had been cut short. I put two thousand of them in the hands of Principals for distribution and return, and also asked the members of the Massachusetts Superintendents' Association to assist me in securing the information which I desired. I here seemed to meet the same sentiment that I thought I discovered in the remarks of my Connecticut friend. One gentleman said that reasons given by principals for loss of pupils might be so colored by the medium through which they had passed as to lose some of their value, and another suggested a wording of my request which would make more apparent the friendly spirit in which I was seeking knowledge. I am convinced that the fears of my friends are groundless, and I am sure that if the superintendents and the high school people would get a little better acquainted, we should be spared such remarks as I have quoted, while we should likewise be spared the supercilious air of superiority which some high school people put on whenever a superintendent says high school in their presence.

Time was too brief for satisfact-

* We did not think it necessary to print the circular.

ory returns to all my circulars to pupils.

I also sent a special circular to seventy-five high school principals, asking for facts and opinions on the subject of my enquiry. To these circulars I received many and most interesting replies. In all, from individual pupils and from high school principals, I got records of fourteen hundred and thirty-six boys and girls, in forty-four towns and cities, who had left Massachusetts high schools without diplomas.

Roughly classified, the reasons given for leaving are as follows: ill-health, twenty-three per cent.; services required by family, thirty-four per cent.; loss of interest and distaste for school life, thirty-six per cent. Attendance at other schools, mostly commercial schools, seven per cent.

It should be said that the number of reports is too small, and the reasons for leaving school, as suggested on the circular, were so few, that the results obtained can be taken only as a beginning—as hinting at conclusions rather than proving anything. If a similar work has not already been done, there is an opportunity here for child study of a most interesting and fruitful kind. A satisfactory study of the question should include several thousand reports, should distinguish between boys and girls, between large high schools, and small high schools, between manufacturing and residential cities, and should include many particulars which I have omitted. I hope some high school man will undertake to do in a thorough manner what I have done so imperfectly.

The letters from the principals give a most empathic negative to the idea that they wish to 'squeeze' pupils out of their schools or prevent them from entering. Many of them keep careful records of the reasons which have induced pupils to leave school without graduating, and labor long and hard to keep everybody at school as long as possible. It would be well to extend this custom of keeping full records of this sort. Why should not the high school principals agree upon a form of annual report to one another which should involve not only the reasons for leaving school, but all the other facts of school organization, school administration, and school statistics which each would like to know?

The number who leave school without graduating differs very much in different communities; on the whole, less than half of those who enter the high schools remain to graduate. The classical high schools retain for the full course a much larger proportion than the English high schools. Wealthy communities have a very large proportion of pupils who complete the course. In most schools the greatest loss occurs during, or at the close of the first year; in a few, during, or at the close of the second year. The percentage of pupils who leave the high school without graduating is continually growing smaller. Whether electives increase or decrease the number of pupils who remain to graduate is unknown: there is a priori evidence on both sides, and little evidence of an experimental nature on either side.

Let us look, as carefully as we can, at general results as form-

ulated, remembering that they are incomplete and inaccurate.

Twenty-three per cent. of all who leave the high school do so because their health has become so poor as to forbid further study. Twenty-three per cent. of fifty-five per cent. is ten per cent. That is, one pupil in ten of all who enter a high school leaves because of impaired health. What a slaughter of the innocents is here! Moreover, the record takes no account of those who leave for other reasons with health more or less broken, or of the sweet girl graduates who stagger through the ceremonies of diploma-giving to return to their homes condemned to invalidism for life.

We know exactly the preventable causes of the whole lamentable experience of the pupils who break down:—no breakfasts, no suitable lunch, dinner at the most unseasonable hour when body and brain are exhausted, lack of exercise, overstudy, nervous anxiety concerning marks and promotion, social excesses, and sometimes home duties of a most exacting character. If we cannot overcome all, can we remove any of these causes and so remove a portion of the results? I have little hope. The whole train of evils that follow the single session is probably beyond our power—sad and unfortunate facts. Parents will have single sessions because children cry for them—teachers are helpless. Nearly, or quite all the other evils are as far beyond our power to remedy. For my part, democrat as I am, I would hail with delight an edict from some competent authority excluding every girl at once from school as soon as she begins to show symptoms of waning

health. This company of physically degenerate young women sent out from school every year to be teachers and mothers of children may well make us tremble for the future of our country.

Thirty-four per cent. of those who leave school early are said to leave because their earnings or their services are required at home. This ratio must vary greatly in different cities and towns. What is true of Newton or Springfield is not true of Lowell or Fall River. But great or small, we can do no more and no better than to bid these people God-speed.

Thirty-six per cent. go out from us before reaching the prescribed limit from lack of interest, sometimes so strong as to be a positive distaste for school life, or from real or fancied lack of ability to do the prescribed work of the school within the prescribed time. The most of these deprive themselves of the good which comes from a generous course of school training, for they enter upon their life-work before they are compelled to do so. What can be done to help these to a broader education, to a fuller life, to a higher type of citizenship and manhood?

We may divide this class into many subordinate classes. I specify a few. Here are those to whom their life-work calls with a voice that simply will be heard. Who can and would forbid them to obey? Here are those who cannot, and whose parents cannot, see any good in high school studies. These pupils may sometimes be won to school and to scholarship by the wise presentation of facts.

Here are those who have no taste for scholastic pursuits, whose souls and bodies cry aloud for air

and exercise and fun and frolic, who seem to principals to be the enemies of good order and necessary school discipline, who often seem to teachers of a totally unregenerated nature—who can do their schoolwork if they will, but simply will not. They are not necessary vicious pupils, really vicious pupils are very few in the high schools, but they give as much trouble and anxiety as if they were. On this class, probably one-tenth of the whole number of pupils, principals often spend nine-tenths of their time not given to class instruction; sometimes with, more frequently without, any gratifying results. Many of these pupils may be kept in school for several years by enduring their nonsense, by being blind to their sins of omission and commission, by catering to their freaks and whims; they may be thrust out by proper authority, or they may be caused to drop out by enforcing a strict standard of promotion. What is the duty of school officials? I believe most heartily that when a principal has exhausted the known resources of his art in persuasion, punishment these people, for their own good as well as for the good of the school should be separated from the school in some way, as the school committees are very unwilling to suspend or expel pupils. I believe to refuse promotion is the wise and practical method to use. Here I suspect that I differ from some of my fellow superintendents and probably some high school men, but reason and experience confirm me in my judgement. Let us establish the truth, if truth it be, that high school education, furnished free to all who can and will appropriate it, is a privilege to

be cherished and esteemed, not a gift to be despised and trodden under foot. I would exhaust every motive in attempting to persuade the careless and indifferent to perform their school work—but having exhausted my powers, I could cease to cast my pearls before people who do not appreciate the value of pearls. Transferred from the school of books to the school of life, the great majority of these people become apt and successful students.

There is another method that is sometimes used to relieve a school from the injury that is done to it by an idle and disorderly pupil: he is told that he is getting no good from his school and advised to leave. This should never be done by anyone except a principal, and by him only in the presence of the pupil's parent, after a careful consideration of all the circumstances. By persuading a boy who has done all the school work he will ever do to leave school and go to work, the principal is performing for the individual and for the community just as high a service as when he is persuading some other pupil to remain longer in school.

Here, too, are the dull, but faithful pupils, who struggle on in pain and distress, disgrace and failure, till health or courage fails, and then go out to bury their hopes and return no more. What should be done for them? Should we "mark them through?" Should we promote them for "effort?" Should we graduate them for having held a book in their hand for four years? Shall we refuse promotion? Shall we suggest that they have chosen a wrong pursuit in life, and that though they are failures as scholars, they may have

the most abundant success in some other calling? Or shall we rearrange the course of study for such prescribing a rather definite course for five or six years of study, in such subjects and in such amounts as they can master year by year? I believe the last method to be the proper one, a method that nine out of ten will reject and not one in twenty will carry out, but one that is relieved from favoritism on one hand and severity on the other.

Seven per cent. leave public high schools to go to private schools, mostly commercial schools. I believe this to be a gradually decreasing number, and that with our improved commercial courses, taught by expert teachers, we are soon to leave the commercial "college" with only such pupils as for good reasons are not connected with public schools. This is a consummation greatly to be desired, for our three and four years' commercial courses in the high schools are vastly superior to the brief courses offered in most commercial schools.

I close this article with one suggestion. The value which the young place upon education is based in a great degree upon what they have been taught before they reach the high school. The fidelity of the grammar school principal in setting a high educational standard before his pupils, the lesson which he draws from the lives of great men for example and inspiration, the knowledge which he has of high school work and the conditions under which it is done, and the preparation which he gives for successful work under these conditions, has a great influence upon the life and work of his pupils

in the high school. It is therefore the duty of the high school principal to establish the closest terms of intimacy with grammar school principals, and uniting with them in long and patient and severe study of the real interests of children and the best methods of promoting them, to lead as many as possible of the young who come under his influence to continue their preparation for life heartily and faithfully.—Education.

Several experiments have been begun in different countries to prove the correctness or otherwise of Dr. Koch's theory of the nonidentity of human and bovine tuberculosis. The results of tests just made in the bacteriological laboratory of the Board of Health of New York City seem to point to the correctness of Dr. Koch's contention. Further experiments, extending over a period of many months, are to be made, and it is thought that these will settle the matter beyond any reasonable doubt. The tests are being made by the inoculating of calves with human tubercle bacilli.

It is said that the applications for the benefits of the Carnegie Trust considerably exceed the number anticipated. As a matter of fact, they will be found to be nearly five thousand, and only very few are likely to be accounted not eligible. Mr. Carnegie himself is highly gratified with the number of claimants, and is not likely to allow the aspirations of any student to be disappointed.

EARTH'S SILENCES.

How dear to hearts by hurtful noises
 scarred
 The stillness of the many-leaved
 trees,
 The quiet of green hills, the million-
 starred
 Tranquility of night, the endless seas
 Of silence in deep wilds where nature
 broods
 In large, serene, uninterrupted
 moods.

Oh, but to work as orchards work—
 bring forth
 Pink bloom, green bud, red fruit, and
 yellow leaf,
 As noiselessly as gold proclaims its
 worth,
 Or as the pale blade turns to russet
 sheaf,

Or splendid sun goes down the glow-
 ing west—
 Still as forgotten memories in the
 breast.

How without panting effort, painful
 word,
 Comes the enchanting miracle of
 snow,
 Making a sleeping ocean. None have
 heard
 Its waves, its surf, its foam, its
 overflow;
 For unto every heart all hot and wild
 It seems to say, "Oh, hush thee,
 hush, my child."

—Ethelwyn Wetherald.

EDITORIAL NOTES.

"May the New Year be a happy one to you—happy to many more whose happiness depends on you."—Dickens.

"The days are cold, the wild winds blow,
 The earth is white with dazzling snow;
 But where true hearts cling close together
 In loving homes, there's pleasant weather."

One of our subscribers, in writing to us the other day, sent this word of appreciation of the work *The Canada Educational Monthly* is doing for education in Canada. "There is not much in the *Monthly* which I can use directly in my class-work in the school-room, but I am always incited to do better for my scholars and school by reading *The Canada Educational Monthly*."

Whatever criticism or commendation of its work there has been in the past, we believe all will agree that its constant aim and purpose have been to help the teacher to realize the magnitude of his work and thus to forward the education of our country. The editor of this magazine knows that the teacher who does not read systematically and persistently is be-

coming weaker day by day. His reserve power cannot be maintained without adding to it constantly from the store-house of the world's best thoughts as recorded by its great thinkers and writers. Teachers need, as much as any class of workers in mental pursuits, the inspiration which flows from the constant contact of mind with mind and this to any real extent can only be got by the steady reading of the ample production of our best writers. Hence, the reason why we are paying so much attention to, not only professional current literature, but to general current literature, as it appears in magazines and books. The editor much appreciates the constant support and encouragement which have come to him during the past years; the

special privilege of frequent communications with the most advanced thinkers and writers on educational questions in Canada and elsewhere, he very greatly esteems.

The teacher must think: read and think again or he fails ignominiously; we wish to prevent this disaster.

We are glad to observe the intelligent interest the press is taking in the school-book question. It is a question which calls for thought and wise treatment.

We are specially pleased that the Kingston British Whig took up the article in the issue of November, of last year in which we paid some attention to this question, making that article the subject of its criticism and we are the more pleased because the Whig's plan of dealing with authorization of school-text books is almost identical with that advocated by the Canada Educational Monthly for more than twenty years. Says our contemporary: "It is marvellous how many men have the idea that they can make easier or better the elaboration of some subject. And so they write books and have them endorsed or authorized by the education department. The Educational Monthly says the minister selects some relative or friend for specialization 'just as he would select a tailor to make him a suit of clothes.' That is absurdity, and yet the system of authorization permits of these extraordinary statements being made. The Whig is against authorization in any form or on any account. The man who writes a text-book should submit it to the education department. It should

be passed upon critically by a committee of experts, and the work should be purchased by the Government and issued by it, at cost, to the school population, if it is any good.

"The only capital involved maybe that invested in the royalty for authorship, but it should be sufficient to warrant careful selection and the publication of the best books. It would end all the scandals of the present authorization, for there will be talk and scandal, even in Kingston, where teachers are interested in the purchase and use of their books and school helps."

In the above extract the Whig charges us with "an absurdity." We ask the Whig to examine the list of those who have prepared text-books for the schools during the past twenty-one years and we are much mistaken or the result will be a vindication of our statement. We hope to have the continual support of our contemporary in the effort to have fair play again practised at the education department in regard to the authorization of text-books.

We notice by the public press that Mr. Principal H. I. Strang, B. A., completed a period of thirty years as Principal of the High School and Collegiate Institute, Goderich. The scholars attending the present sessions of the school in a very commendable spirit marked this event in the history of the school by making a presentation to Mr. Strang. The pupils of the school and the Board of Trustees did themselves honor in thus recognizing publicly the long and faithful services of Principal

Strang. This magazine joins Mr. Strang's many friends in congratulating him upon his successful services in the interest of education, and hopes that he may be long continued in health and strength to manage the activities of the Collegiate Institute in Goderich.

Prin. Radcliffe, London, Institute, has expended the sum of one hundred dollars, which he received from the Board for the purpose of purchasing statuary, pictures and other works of art. The Board makes an annual grant of this sum, and as a result of Mr. Radcliffe's judicious use of the money, the collegiate is rapidly acquiring a fine collection of works of art. The articles purchased with the year's grant have arrived, and consist of a statue of Minerva, 42 inches high; a bust of the Emperor Augustus, 36 inches high; a mask of Brutus and one of Jupiter, two plaques or medallions, representing respectively Night and Morning; a handsome picture of Amiens Cathedral, two of Shakespeare's home, thirty of various classical subjects and a number of other pictures—forty-one in all.

There has been a good many attempts to influence the Canadian Legislature to alter the existing laws affecting copyright in a manner which would be injurious to the interest of authors and owners of copyrights in this country. Thanks to the foresight and energy of, among others, Mr. Daldy on this side, and Mr. George N. Morang in Canada, the most threatening of these attempts have been frustrated. There is every

reason to hope that the majority of these interested in the matter in Canada are becoming alive to the fact that for Canada to force on this country any purely selfish and 'protective' policy as regards copyright would be not only unjust but very short-sighted.

Apparently, what has been aimed at in some quarters in Canada is the power to take the British author's work, whether he likes it or not, and pay him something or nothing—at any rate we fear the result would have been anything but satisfactory—to the author.

But Canada is a loyal and patriotic as well as most important member of the British Empire, with perhaps a more promising future than any other. Are there to be no Canadian authors whose work will reflect credit on the Empire generally?—are there not some already? Why should Canada cripple the growing literary genius of her people by enacting, or attempting to enact, laws which can only provoke retaliatory measures in this country and in other colonies?

British copyright, as it at present exists, is one of the most wonderful things in the world. A Canadian author writes a book, he publishes it in this country, and the cost of doing so is purely nominal, and by that simple act of publication he gets absolute protection throughout the whole of the British Empire, and he also gets protection in all other countries with which we have copyright treaties. Does this mean nothing to a young, growing, and intellectual people? We can conceive nothing more calculated to hinder the intellectual development of

Canada and the formation of a great literature than that her authors should be shut out from the enjoyment of full copyright throughout the Empire—and that is what would happen if Canada dealt unfairly with the holders of copyright in other parts of it.

Imperial Federation will never be complete if copyright throughout the Empire is not uniform.

'Expectant Canada,' as the editor of the *Canada Educational Monthly* for October tells us, is 'confidently entering into the race for riches and power; her natural resources are unexcelled by any other country. May she tread becomingly in the ways of truth and wisdom.—The Publishers' Circular.

COMMENTS.

SECONDARY SCHOOL YEARS.

Suggestions are occasionally heard to the effect that high and secondary schools are not of equal importance with the elementary schools below them or the colleges and professional institutions above. This claim is based on the theory that the secondary school neither starts the children on the educational road nor assists them to the finish. It must take pupils in whatever condition they enter its precincts and make them ready to fulfill the demands of the colleges.

In contrast to this conception of the secondary school, some thoughts from Pres. Charles F. Thwing, in the *Congregationalist*, are refreshing. At eighteen and a half years of age, he says when the student raps at the college portals for the first time, the student is pretty well formed. Little can the college do for him in comparison with what the school may and should do for him.

The four years between the ages of thirteen or fourteen and seventeen or eighteen are the most cr-

tical of all critical periods. It is a time of storm and of stress. It is also a time when the heart grows and blossoms in largest efflorescence, but when the intellect, though growing, does not reach its maturity. It is a time of increasing force of dominant passions without a corresponding increase of judgement. It is a time also when temptations are most frequent and riotous, and when the will is not the strongest. It is a time when restraints should be applied, but also when they should be applied to a growing boy with the utmost wisdom.

In this condition, therefore, what can the schoolmaster do? Rather, what can he not do? For one thing and in one respect—and a most important respect, too—the schoolmaster is to do for the school boy what it is said that the great master of Uppingham did for the boys committed to his care with consummate judgment and triumph: "to detect and to check the subtle beginnings of impure thought; to create a healthy disgust for impure conversation; to set up all possible guards against the temptation to impure act; to

arm boys for the inevitable struggle with their own lower nature or against the influence of evil associates." The master who has insight, tact, judgment, moral courage, will send his boys forth into life clean, strong, noble. The master who lacks these qualities is in peril of seeing his boys going forth from him and in peril of seeing them enter college, bearing in themselves the seeds of the vices of the world without either the will or the wish for their extirpation.

The secondary schools can do more to secure a sound body than can be done later. The gymnasium means more to a boy of seventeen or eighteen than to the man of twenty-three. Exercise is more efficient in securing the best results in the middle years of the teens than in the last. The proper choice of food, too, has greater value in securing soundness of health.

In the formation of correct habits that make for health, the opportunity of the fitting school is far richer than the opportunity of the college. All the sports, golf, foot-ball, baseball, are more significant on the school than on the college campus. Also in the formation of that most precious condition—good manners—the early education is more productive than the later.

The opportunity of the fitting school is great, rich, and diverse. It is a means for the formation of character, moral and intellectual. In it the body is to be nourished into permanent health, the manners are to be refined, and through its personal and other influences on both teacher and student, the fitting school will be the greatest power for the preparation of a

man for the living of that highest life which we denominate the Christian.—*Journal of Education.*

HINTS ON DISCIPLINE.

A few thoughts on discipline are worth quoting, from an article by Guy S. Melvin, in the *Iowa Teacher*.

Perhaps one of the most common mistakes which lead to bad school management says the writer, is listening to what some persons say about certain pupils in a school. There are always a few who are too willing to inform the new teacher about the school he is to teach. If the information was correct it might be of some benefit, but almost invariably it gives an entirely wrong idea of the condition of affairs. If any knowledge of a school is needed it should be acquired from reliable persons. It is a good plan to obtain some knowledge of a school before taking charge of it, but the teacher should not allow his actions to show that he possesses such knowledge. For instance, if he is told that a certain boy is bad, and he then treats that boy as though he expected him to do something wrong, he will not have to wait long before the expected will happen. The best way to handle the bad boy is to make him a friend, and that can not be while he is treated with suspicion. A frank, open manner makes friends; suspicion makes both teacher and pupil feel uncomfortable. We should never condemn until we have absolute proof of guilt.

The first part of a term necessarily includes the arrangement and preparation of the school for the work that is to come. This must be well done, so that the machinery of the school may

move along smoothly and without friction. To secure this some attention must be paid to the seating of the pupils where they will work with the least annoyance to one another. The correct arrangement can not be made at once, but changes must be made from time to time. A right amount of attention paid to this item of school management will do much to contribute to the order of the room. Many pupils who are idle and mis-

chievous when with other pupils are studious when alone. It is an old adage that "An idle brain is the devil's workshop," and nowhere is it realized more than in the school-room. It is impossible for the young pupils to apply themselves to study all the time, and entirely wrong to try to make them do so. When they become restless, they can be given some work supplementary to their regular work.

CURRENT EVENTS.

In Denmark education is compulsory between seven and fifteen, and it is said than even in a large city like Copenhagen not a single child is allowed to evade the compulsory attendance clause.

At a recent congress of physicians in London, Professor Koch, of Berlin, the discoverer of the tuberculosis germ, took the ground that it is not true as had been supposed that tuberculosis can be readily conveyed to human beings by milk or butter from cows afflicted with what is known as bovine tuberculosis, nor from the use of the meat of tubercular cattle.

The safety of our Empire is largely dependant on our having great sailors and great schoolmasters. In time we should feel as much enthusiasm for our schools as for the Royal Navy. The highest work of both was, while safeguarding material well-being, to secure intellectual and political freedom.—M. E. Sadler.

The new scale of salaries for Irish teachers is not exactly princely. Salaries for men run from 56 pounds to 175 pounds, for women from 44 pounds to 141 pounds; but the higher salaries are for principals only. Male assistants are to receive 56 pounds to 77 pounds, female, 44 pounds to 65 pounds.

English inventors have been working away on a system of wireless telegraphy through the earth, and have succeeded in attaining a measure of success. At a recent experiment a message was carried over four hundred yards, the only instruments used being spikes bearing an apparatus and driven into the ground. The pitch or tone in which the radiations are sent out are varied in an almost endless way, and different tones pass harmlessly by one another. The system is identified with the names of Messrs. Armstrong and Orling, and has it in the promise of wonderful and far-reaching results.

St. Petersburg has the highest death-rate of any European capital, 51 per 1000.

According to recent reported statistics, Sweden, in 1900 contained 5,136,441 inhabitants, of whom 2,506,436 were males, and 2,630,005 females, an increase of 351,460 over the census of 1800. While 4,032,284 people inhabit the country, the cities contain 1,103,957 inhabitants, 300,724 in Stockholm, 130,619 in Gothenburg and 60,857 in Malmo, the three largest cities.

In a recent Oxford Convocation it was unanimously resolved to accept the bequest of the widow of Matthew Arnold, formerly Fellow of Oriel College and Professor of Poetry, bequeathing 1,000 pounds for the purpose of founding an annual prize, to be called the Matthew Arnold Memorial Prize, for an English essay upon some subject connected with literature, open to all the members of the University, who have taken the degree of Bachelor of Arts, and not exceeded seven years from matriculation. Convocation also put on record its gratitude to Mrs. Arnold for her generous gift.

The following are the last returns sent in to the Vatican of R. C. populations: The number of Roman Catholics in England and Wales in 1901 is 1,429,850, as compared with 1,339,640 in 1895; in Scotland 413,500, with 363,000 in 1895. But in Ireland there has been a decrease from 3,543,216 to 3,538,305. In Canada there has been an increase from 2,199,530 to

2,201,660 within the five years. In Australia, Tasmania, and New Zealand the Catholic population has grown from 3,000,390 to 4,507,980, and in Africa the Roman Catholics, who were about 400,327 in 1895, now number 481,782. In India they number about 750,000.

There is probably an error in the total for Australia and New Zealand.

Just what the effects of literature upon the growing minds are we cannot say. They are necessary and manifold. One is the development of the reconstructive imagination. Another is the increase in the power of using the English language, both to obtain thought and to express one's own. But lastly, by far the best result of literature is the energizing and spiritualizing of the child's whole nature, and setting it in the right direction, and this is better than the development of any special power. He comes in contact with the high and true ideas of the race, those that show the sweetness and the power of the life of the spirit. He sees the splendor of devotion to duty, of the passion for truth, of the love of parents, of patriotism, so presented in literature as to impress him more vividly than reality itself.

The Syracuse Board of Health has decided on a monthly examination of the children in the city schools with reference to general health and particularly with regard to defective vision. The Newark, N. J., Board of Education has instituted a daily medical examination of the school children.

SCIENCE.

By J. B. Turner, B.A.

MINERALOGY AND GEOLOGY IN THE
HIGH SCHOOL COURSE.

For some time there has been an agitation going on to have Mineralogy and Geology added to the work of Form IV, in the High Schools and Collegiate Institutes. The matter was discussed at the meeting of the Natural Science Association last Easter, in Toronto, and a resolution was passed asking the Minister of Education to make these subjects an option in Form IV. A copy of the resolution was ordered to be sent to the Minister of Education for his consideration.

Before the resolution is given effect in the regulations of the department the whole situation, as far as the science work is concerned will doubtless receive careful consideration.

One of the first questions that will naturally arise is what class of students will take up this work. Not the students for matriculation; for so far the Universities have not placed these subjects on their matriculation course. There remains, then, only those who are candidates for teacher's certificates or those who desire to take a course in the subjects for a special purpose. The recognition of the rights of students of the latter class opens up the whole question of special training in connection with High School work, a question we are not discussing at the present time.

We shall confine our attention

then to a consideration of the matter in relation to the work of candidates for teacher's certificates. Suppose, for a moment, that these are made optional subjects in Form IV, how many candidates would take this as their option? Past experience shows that the students who take a science option in preference to a language one are still in a minority. Would this new option attract more students to the science work? That is a very debatable question. If the object is to secure an extension of the scientific method among prospective teachers, a better way can surely be found to do so than by increasing the number of subjects in the science department. A more reasonable solution of the difficulty would be to use to a greater extent the subjects already on the programme of studies.

Several reasons will suggest themselves why this should be done. In the greater number of our schools the work of the science department is done by one teacher and when it is remembered that the department includes botany, zoology, chemistry, and physics, each of which is a progressive science, it will readily be seen that this teacher at least cannot have much spare time to devote to two additional rapidly progressing sciences. It may be answered to this that more teaching power will have to be secured. Those who have had experience in this direction will know the difficulties that will have to be overcome.

There has always been an outcry against the number of options in the High School course and the tendency recently has been to reduce the number of them, and wisely too, so that some more than ordinarily cogent reason will have to be given why a new option should be added at this time and as far as the writer is concerned, that cogent reason is not now apparent.

Instead, then, of dissipating the energies of the science teachers on a number of subjects it would surely be better to allow them to confine their attention to a few and to aim at securing greater thoroughness than we have at present.

It cannot be said that the proposed new system will be of greater advantage to the teachers in our rural schools than the science subjects already on the programme. Indeed, it is certain that they cannot be used to as great advantage in most of such schools as those that they must necessarily replace if they are to become a part of the teacher's course.

It is to be hoped that as a result of this movement the science department will not suffer as some of the other departments have by attempting to force too much work into the course of study and thus sacrifice quality of work to number of subjects.

SCHOOL HYGIENE.

Helen MacMurchy, M.D.

VACCINATION.

The London Spectator for November 9th, 1901, quotes the following figures from a letter which was published recently in the London Times, by Mrs. Garrett Anderson, M.D., Dean of the London School of Medicine for Women :

"Vaccination and revaccination of all children of school age has been compulsory in Germany since 1874, and in 1899, when this law had been in operation for twenty-five years, the total deaths from smallpox in 285 German towns, with a population of nearly sixteen millions, were only four. That is one side of the picture. The other side is supplied by France, where vaccination is far less universal. Here in 116 towns, with a population of eight and a half millions, the deaths from smallpox in the year

1899 were 600. This seems to us precisely the kind of parallel which is calculated to strike the popular imagination. In Germany, out of sixteen millions of people, four died of smallpox in the course of a year. In France, out of eight and a half millions of people, 600 hundred died of smallpox in the same year. What is there different in the two examples? The greater or less use of vaccination?

COMPULSORY INSURANCE AND TUBERCULOSIS.

According to the tables of the German Imperial Insurance Department, of patients treated in 1898, 38 per cent. of men and 44 per cent. of women were ascertained to be still able in 1900 to support themselves by their work.

According to the recent medical statistics of the Hanse Towns Insurance Institution, for the compilation and publication of which Drs. Predohl and F. Reiche, of Hamburg, deserve much credit, out of 558 patients whose sanatorium treatment took place more than three and less than five years ago the present condition, as ascertained November, 1900, to March, 1901, is as follows: Seventy-four patients are known to have died; in 162 the earning power is complete, and under favorable conditions promises to last; in 267 the earning power is at present complete, but there is doubt whether it is likely to remain so; in forty-eight the earning power has improved; in seven there is no earning power, at least, in the German legal Insurance sense, that is to say, the earning power is reduced to less than one-third. These results are sufficient to justify the system of State Insurance and warrant the hope that better still may be achieved in the future.—British Medical Journal.

A DIET OF GROUND ROCK.

The report of the Connecticut Experiment Station just issued contains (page 165) a somewhat startling arraignment of the alum baking powders with which the country is flooded. Of the fifteen brands analysed, about every imaginable adulteration was discovered, varying from sulphuric acid (22 per. cent.) to ground rock! The latter form of adulteration is characterized by the report "as a particularly reprehensible adulteration, because very likely to

prove injurious to health," which may well be believed, considering that it was found in one sample to so large an extent as over 25 per. cent. Of this baking powder the report says:

"This preparation contains more than 25 per. cent. of a ground rock, insoluble in strong acids, and consisting chiefly of silicates of magnesia. Prof. S. L. Penfield, of Yale University, kindly examined this material and found it to be a mixture of pulverized talc and tremolite, a species of hornblende, which is extensively mined in northern New York, perhaps elsewhere, and is much used as a filler in the paper manufacture. The tremolite appears under the microscope in sharp, needle-like splinters, which makes it a dangerous admixture in food."—The Philadelphia Medical Journal.

Dr. Rhys Davies, one of the Medical officers of the Swansea School Board, has recently been examining some Welsh school boys. The result of his examination was that in a class of fifty boys, generally speaking, two or three were color-blind, five or six lacked acuteness of vision and seven or eight were more or less deaf.

The Minister of Public Works for France, aided by eminent French Medical men, has induced French railroad companies to undertake important improvements in the hygiene of their railways.

The School Board, of Vienna, Austria, is considering the question of the medical inspection of the schools under its charge.

BOOKS AND MAGAZINES.

To accommodate readers who may wish it the publishers of THE CANADA EDUCATIONAL MONTHLY will send, postpaid, on receipt of the price, any Book reviewed in these columns.

The cover of the Christmas Scribner's is as usual of particular beauty; the design is by Maxfield Parrish. The first article on the "American Portraiture of Children" is written by Harrison S. Morris, and is fully illustrated by reproductions from the work of Sargent, Miss Beaux, Alexander, Chase, and others. Otherwise by far the most striking contribution is a beautiful short story, "The Turquoise Cup," by Arthur Cosslett Smith.

It has been the custom of the Century Magazine for some years to present in the Christmas number a great poem, illustrated. For 1901 the poem chosen is Milton's "L'Allegro"; the illustrations, more than usually adequate, and reproduced in color, are by Maxfield Parrish. Th. Bentzon's charming article on a child's recollections of Christmas in France, is illustrated by the more charming child pictures of Maurice Boutet de Monvel. A serial story, "The Rescue," by Ann Douglas Sedgewick, is begun in this number; it is somewhat after the manner of Henry James.

In the December Atlantic it would be difficult to decide whether to give the preference to "Lord Mansfield," by John Buchan, or "A Plea for Crabbe," by Paul Elmore More; they are both articles of unusual literary distinction, and much human interest.

"The Defeat of the Method," by Margaret L. Knapp, and "In Her Dotage," by Susan Lawrence, are two good short stories. "The Piague of Statistics" is a contribution of humorous truth, by Eugene Richard White.

There are a number of interesting book reviews in the Book Buyer for December, including "Italian Journeys," by L. R. Sullivan; "The Portion of Labor," by Octave Thanet; "Childcraft as a Fine Art," by Carolyn Wells, and "The Season's Art Books," by W. C. Brownell. The cover is quaint and interesting, and the magazine is in every way worthy of the Book Buyer's reputation for good Christmas numbers.

The December Cosmopolitan contains a second of Bret Harte's admirable caricatures of modern fiction. The present example deals with the historical novel, and is named "The Adventures of John Longbowe." Richard Le Gallienne contributes a couple of child songs; and Francis Willing Wharton an interesting short story, called "Mrs. Evans' Last Sensation."

John Morley's speech on the unveiling of a statue to Gladstone is reproduced from the London Times in The Living Age for December 7th.

Lippincott's Magazine for December contains a well-written historical story as its complete novel; a charming article by Agnes Repplier, on "The Oppression of Gifts"; and one by Edmond Goose, on "The Best Books."

There are four articles on important people in the December number of the American Monthly Review of Reviews: John Redmond, Li-Hung-Chang, Virchow, and Kate Greenaway.

The Philistine for December is somewhat largely devoted to a consideration of its enemies.

Miss Josephine Dodge Daskam, whose child stories are meeting with much approval, contributes the first story to the December St. Nicholas: "The Imp's Christmas Visit" will doubtless interest the St. Nicholas children. "The Boy and the Baron," by Adeline Knapp, is the second of the long stories complete in one number which have been announced for this year. Much of the magazine's best work is to be found in the departments which can be called new no longer.

"The Underhold" is an excellent short story by Myron B. Gibson, in The Youth's Companion for December 12th, which shows what is possible for the boy who finds himself at a disadvantage in school to accomplish. The second and final paper by Lady Stanley, on "Tragic Blunders," the story of the pets of her childhood, appears in the same number. It is not hard to understand after reading these articles

why Dorothy Tennant was considered such a charming person.

The Sunday School Times for December 7th is the Christmas issue, and contains special articles such as "Christmas Eve in Camp," by Curtis Guild, jr., and "Deceiving Children About Santa Claus."

The Ladies' Home Journal for December contains a number of announcements with regard to the coming year. Mr. Ernest Seton-Thompson is to have charge of a department for boys; Helen Keller is to tell the story of her life; and there are to be serials devoted to Chicago and Philadelphia, in the same way apparently as one last year dealt with Boston.

The American Journal of Nursing has entered upon its second year after an initial year of marked appreciation and success. The permanent value of many of its articles to the nursing profession, the independent character of its editorials, and the fact that it is well printed and attractive in appearance have all contributed something to its success. It is an important magazine.

American Medicine, a weekly medical review, entirely under professional control, and edited by Dr. George M. Gould, of Philadelphia, is one of the most valuable of American medical journals. Recent numbers have contained special articles on the case of President McKinley, and on the outbreaks of smallpox, tetanus and

diphtheria which have come under public notice in various places in the United States of late.

The Philadelphia Medical Journal maintains its reputation as a high-class medical weekly. Its editorial comments and original articles are always worthy of careful perusal. A special feature is the careful summary given of the current numbers of American, British, French and German medical journals.

The New York Medical Journal is now publishing a series of articles on "The Daily Medical Inspection of Schools," by D. S. Lamb, M. D., Washington. This is probably the most important work on the subject that has yet appeared. The three articles already published trace the history of the movement in favor of medical inspection of schools in a complete and satisfactory manner. The Journal has lately introduced a new feature, called "Our Subscriber's Discussions," in which brief essays on medical subjects are submitted to the Journal and published by them as a series of prize essays.

Every Supt. and every High School Principal should read the article in January Education, (Boston, Mass.,) by Supt. Geo. E. Gay, of Malden, on "Why Pupils Leave the High School Without Graduating?" It is a paper that is replete with facts which will afford food for serious thought and reflection.

The contents of The Monthly Review for December are: "Editorial Articles, "National Fog," "On

the Line," "The Crown and the Empire," by C. de Mierry; "The Loss of the "Cobra," "A Bird's-Eye View of Education in America," by Cloudesley Brereton; "Shipping Subsidies," by Benjamin Taylor; "The Contemporary Critic," by Richard Garnett; "The Symbolesin of Signorelle's Pan," by Roger Fry; "Magic Mirrors and Crystal Gazing," by Andrew Lang; "Francis Gordon," by G. S. Street; "A Famous Mediaeval Hunting Book"; "Dobryina," and "The Pitsfall," by Mary Cholmondeley.

The publishers of Oxford University have issued an ideal edition of Chaucer, in one volume. It is edited from numerous manuscripts, by the Rev. Walter W. Skeat, whose reputation as one of the foremost scholars of Anglo-Saxon and early English is fully justified by an edition of Chaucer, which will almost certainly be accepted as final. The printing, paper, and binding are all of much excellence.

One of the most valuable contributions to the November Studio is entitled "Leaves from the Sketch Book of the late Charles Keene." There are seven illustrations which admirably demonstrate the manner and wonderful equipment of this master of black and white. There are also some exquisite reproductions of the pencil drawings of A. Garth Jones, which remind one forcibly in several particulars of the work in illustration done at the time when Keene's drawings were made; but the later art is more self-conscious.

Professor Archie, by Leila Percival: pp. 104, London, Thomas Nelson and Sons. The story of how a fisher had, in the Highlands of Scotland, worked his way through many drawbacks to the honorable and influential position of a professorship in Cambridge. A beautiful story well written, inspiring and wholesome in its teaching. Well fitted for all school libraries.

The Pitt Press Shakespeare for schools, MacBeth, by A. W. Verity, M. A., London, C. J. Clay & Sons, 1s 6d. Mr. Verity edits this edition of MacBeth with great care, giving us very valuable aid in the study of the play by his scholarly introduction, notes, glossary, appendix, and indexes. It would be difficult to praise the book too highly.

The Young Barbarians, by Ian MacLaren, London, Hodder & Stoughton; Toronto, The Copp, Clark Co., \$1.50. There are many in Canada who have read with profit and grown wiser by the reading of "Beside the Bonnie Briar Bush" etc., etc., from the pen of the talented writer, Ian MacLaren. This book is interesting, strong and fresh, as was to be expected. All true teachers and educators will enjoy it, especially those from 'Braid' Scotland. Boys will find in it stories which they will much relish. The illustrations are beautiful and sympathetic to the tone of the tale.

W. J. Gage & Co's Educational Series, "The Lay of the Last Minstrel"; edited by Dr. Reynar, M. A., Vict. Univ., and C. Clark-

son, B. A., Prin. Coll. Inst., Seaford, with an excursus by Rev. Dr. Clark, M. A., Trinity Univ. From the preface we quote: "This edition of The Lay of the Last Minstrel is primarily intended to meet the requirements of the Univ. Examinations and of the higher examinations held by the education departments of the various Provinces of the Dominion." The book is remarkably well done, such indeed as we would expect from the pen of Profs. Clark and Reynar. Their work in these pages shows that they are able to appreciate Scott, whose life was an embodiment of the genial and masculine virtues of the older type so celebrated in his writings.

The Teaching of History by the Syndics of the University Press 2-6 net. This book consists of nine essays and the introduction on the different classes of history, ecclesiastical ancient, constitutional, etc. aims of teaching history in schools and the practice thereof. The last is by W. G. Ashby, M. A., at one time Professor in the University of Toronto, now Professor in the University of Birmingham. All these essays are by competent and scholarly men, all university men, and engaged in teaching. The essay—The Teaching of History in Schools—Aims, by W. H. Woodward, Principal of the University Training College, Liverpool, is a most valuable one, and one that all teachers of history in our schools, especially High Schools, should read; suggestive hints can easily be gotten also in all the other essays.

The Dominion Government sends out information regarding Manitoba and the North-West in a

large, handsomely-illustrated pamphlet of forty pages. This book is issued by direction of Hon. Clifford Sifton, Minister of the Interior, and thousands of copies are distributed gratuitously. The Sifton publication is called "Atlas of Western Canada." It contains the up-to-date maps of all the provinces and districts of Canada; its statistics are reliable, and the letter-press makes extremely bright and entertaining reading. The reader is surprised and delighted with the description of our magnificent land of plenty in the great West. Take it all in all this book shows how interesting the study of geography can be made.

"Tarr and McMurry's Geographies."—First Book: Home Geography, and the Earth as a Whole. By Ralph S. Tarr, B.S., F.G.S.A., and Frank M. McMurry, Ph. D. (7 x 5 in., pp. xv., 279, with Maps and Illustrations; price 3s. 6d. Macmillan.)

This is the first volume of a series of three. The second is to deal with North America, and the third with Europe and the other continents. Mr. Tarr is Professor of Physical Geography at Cornell University, and Mr. McMurry is Professor of the Theory and Practice of Teaching at Teachers' College, Columbia University. They begin with home geography as all good teachers of geography do.

As the children's surroundings, however, do not always contain all that is necessary, the first part of the book is devoted to giving information about, and suggestions for the study of, such common things as soil, hills, valleys, indust-

ries, climate, and government, which are part of every child's environment, and then deals with other matters such as mountains, rivers, lakes, and the ocean, which, though absent from many localities, are, nevertheless, necessary as a preparation for later study. In this part of the book the authors are, in our opinion at their best, and all engaged in teaching geography will find these hints, good examples to study, for adoption.

In doing this, pictures, which are mainly photographs of the actual objects, are profusely used, and everything is considered in the light of its relationship to mankind—geography being here, and very rightly, considered to be the study of the relation between the earth and man. The maps, which come later and also are numerous, are clear, well colored, and of moderate size, nothing being inserted which is not actually needed.

The "questions for review" and the "suggestions" given at the end of each section have struck us as likely to be useful as a rule, and so are the two lists of books of reference given—one at the end of each part. Of course, the volume is intended for children in the United States and the States naturally occupy the lion's share of the space. This feature of the book is rather overdone and British subjects might be spared, the well meant remark that they are allowed considerable freedom.

The Royal Observatory, Greenwich, by E. Walter Maunder, F. R. A. S. The Religious Tract Soc-

ity: pp. 320, 5s. We have here a very interesting account of the work of the Royal Observatory, at Greenwich, from its foundation in the reign of Charles II, in 1675, to the present time. It is a book for the general reader, and it contains much information, not only useful but interesting. The sketches it gives of the Royal Astronomers, the manner in which these able and devoted men overcame difficulties with such inadequate means are most interesting; they strongly call upon the reader, go thou and do likewise in thy daily work. We very highly recommend it to masters in our Secondary Schools, especially the mathematical masters, who may find material to inspire their scholars, if the spirit of noble deeds is theirs. The book should find a place in the library of every Secondary School in Canada.

Britain Over the Sea. By Elizabeth Lee: Pp. xlvi., x237, 4 maps, 2s. 6d.

John Murray, Albermale St., London, Eng. This is a book which every teacher in our Public Schools should have, every teacher of history, and literature and geography in our High Schools, and it should be used for supplementary reading in all the schools. Miss Lee compiles and edits, giving letters, extracts from speeches of public men, setting forth reasons of State for the acquisition of different parts of the Empire, as well as the humanly undesigned acts, which frequently lead to most important results. Canadians will be pleased with this book, we venture to say.

Riverside Biographical Series. Paul Jones, by H. Hapgood. Houghton, Mifflin and Company, Boston, 50c.

Algebon, by E. M. Langley, M.A., and S. R. N. Bradley, M.A., masters in Bedford Modern School. Pp. ix. x 192. John Murray, London, 1901, 1s, 6d.

Webster's Collegiate Dictionary. Octavo. 1100 pages. 1400 illustrations. This latest and largest abridgment of the International contains most of the essentials of the larger work, and was prepared under the same editorial supervision. Its Vocabulary is adequate for ordinary needs and conveniently arranged so that the word wanted may be quickly and easily found. Its definitions are complete, lucid and exact. Its Etymologies are full and scholarly. Pronunciation is indicated by respelling with the familiar diacritical marks used in the schoolbooks. The appendix contains a pronouncing vocabulary of scripture, Greek, and Latin proper names, with modern geographical and biographical names; a vocabulary of rhymes; English christian names; deities and heroes; foreign words and phrases; arbitrary signs and abbreviations; and a Scotch glossary—the most complete and reliable dictionary of Scotch words and phrases accessible. The correct pronunciation of Scotch dialect is plainly indicated. Bindings and prices with complete reference index: Cloth, \$3.00; Sheep, \$4.00; Half Morocco, \$5.00. Sizes, 7 x 10 x 2 5-8 inches.

Blue Shirt and Khaki, by Jno. I. Archibald, Boston: Silver, Burdett & Co., \$1.50. In this book

Mr. Archibald contrasts the British and American soldier, and also the system of carrying on war as seen in South Africa by Britain and against Spain and Cuba, by the United States of America. In comparison the Khaki takes second place, in physique and intelligence, accounted for by the higher pay and the smallness of the number thus far required for the American army. The British troops from Canada, South Africa and Australia are acknowledged to be equal to the "Blue Shirt" in independent action in which it is said the home troops are lacking. The men from the "sister kingdoms" are not often mentioned but every time that notice is taken of them their high qualities in the field are recognized. The sympathies of the reader are strongly appealed to by the unfair way the cause of the Boers is presented throughout the whole of the narrative. Evidently Mr. Archibald does not understand the strong feeling of attachment between the men in the ranks and the officers, nor has he been able to appreciate the strength of the sentiment which binds all parts of the Empire into oneness, which trial only serves to make manifest to the whole world. Though we think the author is mistaken in many of his observations yet the reading of the book and its like will prove beneficial to the British soldiers, particularly to the officers as it is written with sprightliness, with mastery, at first hand, of varied theme, and is abundantly illustrated.

The Growth of the Empire. A Handbook to the History of Greater Britain. By Arthur W. Jose. Pp. xv, 422. With 31

maps. London: John Murray. 1901. 6s.

This book is an outline sketch in which the gradual acquisition of the oversea Colonies and possessions of Britain is regarded as the product of British life and character. The search for India provided the originating impulse of expansion to Britain, just as it did to the other nations of Western Europe, Portugal, Spain, France, and Holland.

"So at last," Mr. Jose writes in his concluding pages, "we begin to see the scheme of the Empire — no planned one, but a natural growth obeying natural laws. India is the central motive of its expansion. To reach India our adventurers threw themselves upon America; to guard the Indian trade we seized South Africa; upon India converge the routes that are dotted from end to end with our forts and coaling stations. And the struggle for India has been the struggle against France. From France we took Canada; just, and only just, ahead of France we secured Australasia; it was for fear of France that we deprived Holland of the Cape Colony. Upon lands won for such a cause from such an enemy the Briton has worked his will according to his nature: masterful, slow to appreciate new conditions, inelastic, but always the coloniser, the maker of homes, the founder of States, the builder of a nation."

Mr. Jose writes in an excellent spirit, the right spirit for the work he had in hand. The subject he undertook to deal with is a large one, and is year by year becoming larger. We think that in justice to Great Britain, more

prominence should have been given to the work done by her in Egypt during the last 25 or 30 years. He confesses that he is not the historian of the Empire, but that he has endeavored to collect some of the material for the historian that is to come. We congratulate him on his success and recommend the teachers of history in our schools to secure a copy for their work. The book should be found in the library of our schools for reference. The pupils will enjoy it.

Book-keeping by Joint Stock Companies. A practical and comprehensive treatise on the organization forms and bookkeeping entries required to meet the varying conditions of Joint Stock Companies of all kinds, together with an analysis of the Dominion and Ontario Acts governing such corporations, by David Hoskins, Chartered Accountant, Principal of British American Business College, Toronto, Ontario. Published by the Federated Business Colleges of Ontario, Limited, Toronto. Price \$1.50.

The author of this work has, avoided the error into which most writers of bookkeeping texts have fallen, namely that of arranging the matter in such a way as to necessitate a large amount of mechanical work being performed before any practical benefits can be obtained; on the contrary, his explanations are so clear and concise and so excellently indexed that the busiest of men can obtain full information on any of the many technical points of Joint Stock Company bookkeeping or

law in a surprisingly short time. The whole subject has been treated in a thoroughly practical and business-like manner and shows a masterful grasp of the entire range of company accounting. The chapters dealing with the conversion of business concerns into limited companies and the amalgamation of companies are particularly good, while the many illustrations of financial statements used by the leading Canadian mercantile and manufacturing institutions cannot fail to be of great value both to the business man and the accountancy student.

The work, written as it is in a clear, terse style, and being the outgrowth of a demand from business men and candidates preparing for the examinations of the institutes of chartered accountants in Ontario and other Provinces, will doubtless meet with much favor and command a large sale among those who have to do with the accounts of joint stock companies. Mr. Hoskins is to be congratulated on his important addition to accountancy literature.

Books received: Laurie's Kindergarten Manual, also Laurie's Infant Education and Descriptive notes.

American History Leaflets, Colonial and Constitutional, edited by A. Bushnell Hart and Edward Channing of Harvard University, 10 cents each. A useful aid for scientific study of history. A. Lovell and Co., New York.

A ton of gold is worth 125,583l. A ton of steel made up into hairsprings is worth 1,576,458l.—more than 12 1-2 times the value of pure gold. Hairspring wire weighs one-twentieth of a grain to the inch. One mile of wire weighs less than half a pound. The balance gives five vibrations to every second, 300 every minute, 18,000 every hour, 432,000 every day, and 157,680,000 every year. At each vibration it rotates about one and a quarter times, which makes 197,100,000 revolutions every year. In order that we may better understand the stupendous amount of labor performed by these tiny works take, for illustration, a locomotive with six driving wheels. Let its wheels be run until they shall have given the same number of revolutions that a watch gives in one year, and they will have covered a distance equal to twenty-eight complete circuits of the earth. All this a watch does without other attention than winding once every twenty-four hours.—Tit Bits.

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