

**PAGES**

**MISSING**

# EDUCATIONAL REVIEW

DEVOTED TO ADVANCED METHODS OF EDUCATION AND GENERAL CULTURE

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## EDUCATIONAL REVIEW

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Fredericton, N. B.

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### INVESTMENT OF SINKING FUNDS.

It is understood that the Board of Education is desirous that School Boards shall invest sinking funds in War Loan Bonds, and as far as possible will give its permission or bring about legislation to enable school trustees to do this.

Surely there is no safer or more sane investment than Victory Bonds.

Not enough safeguards have been provided in the past to ensure the careful handling of sinking funds by school boards. In too many cases have these funds been neglected or drawn upon for temporary use and not replaced.

It would probably be surprising if investigation were made how many boards had not lived up to orders given them in their authorization to borrow money.

Sinking funds are easily subtracted from and with difficulty added to.

It would be interesting to know the number of school boards in this province which have fulfilled their obligations and whose sinking funds are intact.

In more recent years the much more desirable and economical method of issuing serial bonds has prevailed.

These have many advantages over the old practice of establishing sinking funds. There is a large saving in interest. You pay as you go in a larger degree, and it enables many small investors to participate who may not desire a long term investment.

### THE FISHER BILL

It is worthy the imitation of all other countries and will not be regarded as the least of the achievements of Great Britain, that in the midst of the stress and anxiety of the greatest war in history, she has found time to for-

mulate and approve the most radical and epochal education bill that the world has ever seen.

The minister in charge of this bill was Herbert Fisher, a man without previous parliamentary experience, but he has displayed great powers of construction and administration.

The object of the bill is set forth in the preamble, which states:—

“The establishment of a National System of Education available for all persons capable of profiting thereby.”

Its three main principles are:—

(1) The raising of the school age from the present 12 years to 14 years. The local authorities have the power to raise this to 15 in their own districts.

(2) The establishment of continuation schools with compulsory attendance for a specified number of hours for all children between the ages of 14 and 16, or after seven years between 14 and 18.

(3) Drastic restrictions regarding child labor.

The Federal Government of the United States has also promised large grants to agricultural and other vocational education.

Why does the Dominion Government so long delay assistance along the same lines?

It has had the chance to lead. It does not even follow!

Success in all lines of endeavour is most marked when backed up by united effort. This is well illustrated in financial, industrial, and in national affairs.

Why should not the teaching profession profit by these examples?

The failure of teachers to obtain suitable remuneration for their services, for example, has been largely due to lack of cohesion among the teachers as a body in demanding a satisfactory return for their work, and in many cases, to underbidding each other. Trustee boards in rural districts especially, are often selected for their positions because of their well known ability to keep down expenses. The “thrift” they exercise in school matters is often at the expense of efficiency in the school. Many trustees will hire the cheapest teacher they can find, without regard to her qualification as a teacher. They will pay the highest price for stock for their farms, and for improved farm machinery; they will pay wages for farm help that would look like a fortune to many school teachers teaching for a mere pittance; but any kind of a teacher will do if she can be secured at a low salary; any kind of a school house with any kind of equipment is good enough for their children.

If teachers as a class hope to achieve anything for their betterment either from school boards or from the

government, they should follow the example of those of other avocations and organize. Possibly those best qualified to lead in this organization are occupying the best paid positions in the teaching profession, but they should be willing to lead the way and work out an organization that will be effective, for the good of the less fortunate.

A Teachers' Association for New Brunswick was formed at the Maritime Convention in Moncton last summer, and steps should be taken to include in it all N. B. teachers. A Public School Teachers' Union of Prince Edward Island was also formed at a convention recently held at Charlottetown, reference to which was made in our last issue. A good beginning has thus been made by these two provinces which should be followed up.

When trained teachers, who have spent all the early years of their lives in acquiring education and training for their work, to say nothing of the expense incurred, are paid less than day laborers for their services, the need of organized effort on the part of teachers is apparent.

All the schools in the Province of New Brunswick were closed by order of the Provincial Health Department, as a precautionary measure to prevent the spread of Spanish Influenza, beginning with Friday, the 11th October. An official notice from Chief Superintendent Carter appears in this issue of *The Review* as to the Government grants to teachers for the time the schools are closed by this order.

The schools and colleges of P. E. I. also were closed by the Provincial Health Department, from October 7th and until further notice. No general order for the closing of schools and colleges in Nova Scotia has been issued by their Health Department. Schools have been closed in a number of places by local boards of health.

It is safe to assume that many *Review* subscribers do not read the directions given under the heading “To Educational Review Subscribers,” following the Table of Contents, otherwise we think so many teachers would not remove to another place than the one for which the address is given on their magazine without either asking to have their paper discontinued or their address changed. Sometimes payment of subscription is repudiated because the *Review* has not been received by the subscriber for the above reason. A little consideration on the part of those concerned would lead them to see that this is neither proper nor ethical. Failure to receive the paper because proper notice has not been given to have the address changed is not sufficient reason for repudiating the claim for subscription price due.

We have had many expressions of appreciation from subscribers and others regarding the Review. If you find it useful and helpful to you, will you not recommend it to others who are not subscribers? You may in this way be a help to other teachers, and you will surely be helping the Educational Review, to say nothing of the reflex benefit you will receive from having performed a good act.

The following appears in the Charlottetown Guardian of October 24th, and is commended to the subscribers of The Review:

#### IMPORTANT TO SUBSCRIBERS.

The Paper Controller has issued instructions to be confirmed by order-in-council that subscribers' newspapers must be stopped immediately after the subscription has been three months in arrears.

To prevent papers being stopped by order of the Paper Controller, subscribers should see at once that their subscriptions for current year have been duly paid.

#### GERMANY IN THE NORTH SEA

##### Heligoland, Kiel Canal, Wilhelmshaven.

Heligoland is Germany's Gibraltar in the North Sea. It is a rocky islet, triangular in shape, resting on a submarine plateau, and is three-quarters of a square mile in area. Its rugged red cliffs are worn into caves by the dashing waves, and the only beach is a sandy spit near the south-east point. In former times the town consisted of two parts—the Unterland, or lower town, of about seventy houses, built on the sandy spit, and connected by a wooden stair of 192 broad steps, and later by a steam lift, with the Oberland, or upper town, on the cliffs above.

The Kaiser Wilhelm or Kiel Canal is a channel through Germany from Brunsbüttel, a port at the mouth of the Elbe on the North Sea, to Kiel, on a magnificent harbor of the same name, and the Baltic headquarters of the German navy. This canal, sixty-one miles in length, saves the long and dangerous journey round the north of Denmark through the Skager Rack and Kattegat to Kiel—a distance of 600 miles.

Wilhelmshaven is Germany's chief naval station and war harbor on the North Sea. It is situated on the north-west shore of Jade Busen, a shallow basin united with the sea by the Jade, a channel three miles long. Three harbors and locks connecting them with their entrances have been added since 1869, and great docks were built in 1906 for the new warships. There is a commercial harbor on the south side of Wilhelmshaven.

Although the later history of Heligoland runs naturally with that of the Kiel Canal, its earlier history is

eventful and interesting. When Canute was King of England this island was one of his Danish possessions, and must then have been ruled from England. In later centuries it shared the fate of Schleswig or Holstein, or both, as the case might be, and was bandied from king to duke and from duke to king, while the peaceful islanders, busy with their fishing, took little notice of the change of rulers.

In the fourteenth century it was Danish once more, and the centre for over two hundred years of the North Sea herring fishery; but when a Danish prince imposed a duty on the fishery the Heligolandians ignored the tax, and then destroyed the fleet sent out to enforce it.

For some time afterwards it was a "No Man's Land"—or, rather, it was an independent Heligoland, with its own laws and customs, and a welcome for all strangers who would observe them. It was a thriving fishery centre up to the end of the sixteenth century when the herring shoals suddenly ceased to come to Heligoland waters, just as they had deserted the coasts of Sweden two centuries before. This time they crossed the seas and made for the Scottish coast. There was other fishing of course, but not the rich hauls of former times.

In the seventeenth century the island became Danish once more, not by conquest, but by an ingenious plan carried out by the navy of Christian V of Denmark. Surrounding the fishermen one night as they were at work with their nets on the fishing banks, the Admiral captured them all, and sent word to the island that if it did not at once surrender the fishermen would be hanged straightway. Thereupon the "wives and mothers maist despairin" compelled the garrison to hand over Heligoland to Denmark in exchange for their husbands and sons.

In 1870 it passed into England's keeping, and during the eighty-three years of her tenure she made little use of it. During the Napoleonic wars Napoleon endeavored to cripple England by engaging all European States under his influence to close their ports to British ships, and by trying to combine all European navies against her. Britain, perceiving his aim, took the initiative and seized the Danish fleet and Heligoland. The islanders welcomed the British, and a glorious time of prosperity followed for them. Fortifications were built, the lighthouse erected, and British goods poured in to await the opening of the Elbe blockade, or be smuggled into adjacent ports at every opportunity. For several years the islanders reaped a golden harvest. Then peace was concluded with Denmark at Kiel in 1814, and Heligoland formally ceded to Britain. Fortifications were dismantled, merchants vanished with their wares, the troops were removed, and only the thunderous roar of the surges broke the quiet of Heligoland.

A few years later the islanders converted their sandy spit into a bathing resort, and summer visitors from Germany, Russia and Denmark, came in ever-increasing numbers.

In 1873 Bismarck, then Chancellor of the German Empire he had called into being, suggested the cession of Heligoland to Germany in furtherance of a scheme to cut a canal from the North Sea into the Baltic. Moltke and the military party then did not favor this proposal, and it was not renewed till 1884, and then, asking the British Government to cede Heligoland to Germany, the wily Bismarck told the Gladstone Administration that it wanted it for the good of Britain as well as for the advantage of Germany. He said that Heligoland was of no use to Britain as it was and would cost her much to improve it, but that Germany would go to the expense of making a harbor of refuge for Britain and the rest of the world. At the same time he casually remarked that he proposed to cut a canal into the Baltic, which Great Britain, the greatest marine power in the world, would find of great value, but that Heligoland was the necessary key to it. "Such a transaction," he concluded, "would strengthen the good feeling of Germany towards Britain in an extraordinary degree." This was too much even for our confiding statesmen, and Lord Granville remarked dryly that doubtless the cession of Gibraltar to Spain would strengthen the good feeling of that country also towards us "in an extraordinary degree."

So the matter was dropped; but in 1890, during the negotiations for the partition of Africa, the Kaiser suggested that Heligoland should be exchanged for certain concessions in Africa. A book written in 1888 by a Scotchman, G. W. Black, gave this prophetic warning: "If this island were ceded to Germany there is no doubt she would at once make it a strong fortress, the taking of which would involve a large expenditure of time, money and lives. Heligoland might be as important to our interests as Malta or Gibraltar." But the prophet was not heeded, and in 1890 Heligoland was ceded to Germany.

Time has shown that this cession was as grievous a blunder as allowing Germany a share in the Pacific, where history would soon repeat itself but for the vigilance of Australia and New Zealand.

The Kaiser lost no time in pushing on the cutting of the Kiel Canal. At the opening ceremony in June, 1895, some of the warships of the great powers were present, and the Kaiser referred to them as "a symbol of peace," although he was revelling in the knowledge that the opening of the Kiel Canal doubled the efficiency of the German fleet, and made Germany independent of the Russian alliance. Then Britain woke up and recognized the weapon she had given to her probable enemy.

The Boer War improved her eyesight still more, and she increased her navy. An appearance of friendship was kept up, and 1904, part of the British fleet visited Kiel to witness a regatta arranged by the Kaiser. The visit was not a success, the visitors being subjected to many small discourtesies.

In 1905 Germany was compelled to widen and deepen the canal, in anticipation of new warships much bigger than the old. The first German Dreadnought was launched in 1908. Then Bernhardt, in his book of 1912, openly acknowledged the purpose of the canal. "The Baltic and North Sea Canal will soon be finished," he wrote, "and its completion will yield considerable military advantages to Germany;" thus the fiction of its international and commercial use was abandoned.

In 1910 Germany, perceiving that Britain was more to be feared than Russia, moved her large warships from Kiel Harbor to Wilhelmshaven, ready for an emergency. The completion of the enlarged canal was timed for 1915, when Germany expected to have eighteen new Dreadnoughts ready for war, but, when the Kaiser and the military party urged that 1914 should be the favoured year for the long desired war, the work was speeded up and finally completed in the midsummer of that year. Army and Navy were then prepared at all points—the pretext for war alone was wanting. On the 28th June the Archduke Franz Ferdinand was assassinated.

Where is the mighty German fleet now? Bottled up in Kiel, whither it fled at full speed after the battle of Jutland. Why does not the British fleet pursue it? Because the Germans have sown all the approaches to the Kiel Canal, Wilhelmshaven, and Heligoland with mines. Under the waves there the North Sea is a mine-field, with secret and tortuous channels known only to the enemy. These mines are anchored, but enemy mine-laying ships creep through the channels and let loose upon the waters countless floating mines which our mine-sweepers gather in and explode night and day.

A German submarine commander recently deserted from Heligoland. He sank his U-boat off the coast of Holland, and took refuge with his officers and crew of thirty in the neutral territory. He gave a tragic picture of the Heligoland of today. From him we learn that though impregnable as a fortress—for every inch of its surface is coated with concrete to a depth of several feet—it has yet fallen to an unchallenged foe that holds it in a relentless grip. There are from 8,000 to 10,000 soldiers on the tiny isle, and lately, strange malignant diseases have broken out amongst them—diseases which baffle the foremost medical scientists of Germany. Men look at each other with dread in their eyes mutely asking, "Who next?"

Disease is the insidious foe that is working with Time to reduce this Gibraltar of the North Sea.—*The School Journal.*

#### LOSS OF THE ROYAL GEORGE

Toll for the brave—  
 The brave that are no more!  
 All sunk beneath the wave,  
 Fast by their native shore!  
 Eight hundred of the brave,  
 Whose courage well was tried,  
 Had made the vessel heel  
 And laid her on her side;  
 A land-breeze shook the shrouds,  
 And she was upset;  
 Down went the Royal George,  
 With all her crew complete.

Toll for the brave!  
 Brave Kempfenfelt is gone  
 His last sea-fight is fought,  
 His work of glory done.  
 It was not in the battle,  
 No tempest gave the shock,  
 She sprang to fatal leak,  
 She ran upon no rock;  
 His sword was in the sheath,  
 His fingers held the pen,  
 When Kempfenfelt went down  
 With twice four hundred men.

Weigh the vessel up,  
 Once dreaded by our foes!  
 And mingle with your cup  
 The tears that England owes;  
 Her timbers yet are sound,  
 And she may float again,  
 Full charged with England's thunder,  
 And plough the distant main:  
 But Kempfenfelt is gone,  
 His victories are o'er;  
 And he and his eight hundred  
 Shall plough the wave no more.

—William Cowper.

An article in the last number of the *Geographic Magazine* contradicts the widely accepted statement that San Marino declared war against Austria on the third day of June, 1915. The facts of the situation seem to be that the council of San Marino took no formal action; but the active sympathy of the Sanmarinese for the Italians caused the Austrians to regard their movements as equivalent to a declaration of war. San Marino has no army in the field, but maintains a war hospital near the Italian front.

#### THE WAR

Since our last issue the forces of the Entente Allies have been everywhere successful. An Associated Press despatch of October 9th, stated that the German troops on the Cambrai-St. Quentin front, on a twenty mile front, had been put to flight and the British cavalry was reported to be pursuing them, the Allied infantry marching in columns of four through villages hastily abandoned by the enemy. Cambrai had fallen, the Canadians being the first to enter.

On the 10th October, Field Marshal Haig announced the capture of Le Cateau. Winston Spencer Churchill said that for fifteen successive days the British artillery had hurled 10,000 tons of shells a day upon the enemy.

Loan, LaFere, Douai, Lille, Ostend, Zeebrugge and Bruges have been captured by the Allies. The whole Belgian coast is now freed from the enemy, and his submarine and aerodrome bases have been cleaned out. The Allied forces are sweeping forward on a wide front. Antwerp and Brussels are expected to be taken from the Hun in a few days. From Antwerp across Belgium it is only 75 miles to the German border, and the German people may soon experience the horrors of war brought home to them in their own country.

Nish, the capital of Serbia, has been re-occupied by the Serbian forces. Durazzo, the Austrian naval base on the Adriatic, with the warships there, have been destroyed by the Allied warships, and Beirout, on the coast of Syria, has been occupied by the French.

General Allenby is pushing ahead in Palestine. At last accounts he was 85 miles north of Damascus.

A week ago sensational despatches came over the wires stating that Emperor Wilhelm had abdicated, and Germany had surrendered. These reports were found to be premature. Peace proposals, however, were made by the German Chancellor to President Wilson. President Wilson replied that no proposals for peace could be considered while the Germans occupied invaded territories and while they continued their acts of spoliation and inhumanity. The German Emperor has sent a counter proposal in which he contends for a peace based on right, not on might, a peace that will safeguard the future interests of Germany.

A schoolboy was given a problem to do. When it was done he took it to the teacher, who looked at it and said: "This answer is wrong by two cents. Go back to your seat and do it correctly."

"If you please, sir," said the youngster, fishing in his pocket, "I'd rather pay the difference."—*The School.*

WATCH THE LABEL ON YOUR PAPER.

### THE BLUE DEVILS AT THEIR BEST

A striking pen picture of the "Blue Devils" of France is given by Harriet Chalmers Adams, the traveler and war correspondent in a communication to the National Geographic society.

"Gerbeviller, the bare skeleton of a town in the Toul section, where the Americans were holding their share of the Western battle line, is the Pompeii of France. Pompeii was wrecked by the might of God; this town by human hate. To reach the most spectral ruins I saw in all France we crossed a bridge which will flame in history, the one held by the 75 chasseurs," says the writer.

"We have an especial interest in the chasseurs, for they have been training our American boys at the front. No soldiers of France are as picturesque as these sunburnt, fiery-eyed men of the Alpine and Pyreneau heights who have left the stain of their loyal blood on every frontier they have touched. The Germans call them "the Blue Devils," and say they can run faster than the chamois, but it is the German who runs when they come his way. They are a merry, care-free lot. I heard a story of one who fired in a kneeling position instead of lying flat on the ground. When asked by a fellow-soldier why he was so foolhardy, he exclaimed that he had a bottle of wine in his pocket, and it had no cork.



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## SHAW CORRESPONDENCE SCHOOL

YONGE AND GERRARD STREETS

Pept. E. R.

TORONTO

"During the battle of Lorraine seventy-five chasseurs were posted at the bridge which leads to Gerbeviller. As the German columns hove in sight, they tore up the pavement, threw breastworks over the bridge and stationed their machine guns. This was in the early morning. At four that afternoon a lone chasseur fired the last round of ammunition and slipped away to join his companions, of whom 51 had survived. For eight hours 75 Frenchmen held off 12,000 Germans.

"Angered into fury by the machine guns which had held them so long at bay, the Prussians entered the town firing and burning every house they passed. Like many French towns, Gerbeviller was built on one long main street with lanes leading from it. Only stark walls stand. Oil was poured into the cellars to make more of a blaze. If the people remained in the houses, so much the better.

"The refugees have crept back. On a mangled wall I saw the sign: 'Cafe of the Ruins.' A girl in black was placing a bunch of wild flowers before the broken image of the Virgin on the wall of what was once a church. Only one building in the town stands—the humble little hospice which sheltered Sister Julie, one of the great heroines of France.

"We rang the door bell and a Sister of Mercy ushered us into a narrow hallway, and then into a little sitting room with oilcloth on the table, and a few stiff-backed chairs. There was a battered organ and an ancient chest and two pictures of religious subjects on the wall. I can see every detail even now, for this was the setting of the woman who defied the whole German army.

She sat upright in her chair with hands crossed, a short, plump woman, past 60, with bright hazel eyes, rosy cheeks and firm mouth. Sister Julie, whose name before she was Mother Superior was Mme. Amelle Rigard, has a most authoritative air. Beneath the cape of her black habit gleams the Cross of the Legion of Honor, pinned there by the president of the republic, who, with many other dignitaries, made a pilgrimage to this remote village to decorate this little Sister.

"Sister Julie speaks rapidly with an occasional gesture. She told us of the 75 chasseurs—how the first to be wounded were brought to her house. She took off the ammunition belts and sent them back by a nun to the bridge. When the houses across the street were fired, she went out to a German officer and said: "Don't you dare to burn my house. I am caring for the wounded. If you spare my house and the people in it I will care for your wounded too."

"And she kept her word. She mothered the homeless population. The stories she told us made me sick with horror."—*The Casket, Antigonish.*

WATCH THE LABEL ON YOUR PAPER.

# Our Cause is Sacred —It Must Prevail

**OUR CAUSE IS THE CAUSE OF HUMANITY.**

**OUR RESOLVE THAT IT SHALL PREVAIL IS  
WRIT IN FLAMING LETTERS OF BLOOD  
AGAINST THE HIGH HEAVENS. SINCE  
TIME BEGAN NO LOFTIER MOTIVES  
HAVE LED SOLDIERS IN BATTLE THAN  
THOSE WHICH GIVE COURAGE AND  
FORTITUDE TO OUR SOLDIER-SONS IN  
FRANCE.**

Cruelty and lust, injustice by  
the strong to the weak, shall  
stop!

Those who invoke the name of  
God, yet burn and ravage;  
those who prate of a Divine  
partnership, yet spoil and tor-  
ture, shall soon be called to  
stern account.

No need to recall how fell and  
with what courage our soldiers  
fight — the world rings with  
their heroism.

To us AT HOME—duty plain-  
ly points the way. Confront-  
ing us—demanding our effort  
to the point of sacrifice—comes  
Canada's call for money to  
"carry on."

Let us consider whatsoever de-  
flect your minds from this—  
the Victory Bond you buy  
through sacrifice are your of-  
ferings on the altar of humanit-  
ferings on the altar of Hu-  
manity.

Issued by Canada's Victory Loan Committee  
in co-operation with the Minister of Finance  
of the Dominion of Canada.



### THE SEMI-SIGHTED CHILD

By Mary Bronson Haritt.

One of the problems which cannot long be kept waiting for the attention of the educationalists in the Province is the pathetic plight of the semi-sighted child. By this is meant not the case of the child who needs only glasses to give him a clear outlook on the world. A comparatively new term, "semi-sighted," distinguishes the child who, while neither blind nor practically blind, and quite able to get about alone, yet suffers from eye-trouble so serious that although glasses may help, nothing can ever give him anything like normal sight. Such is the albino, whose pale-pigmented iris and light lashes and brows let too much light into the eye, condemning him to lifelong dimness of vision. Such are those little victims of accident or disease who wear a scar on the cornea like a blur on a window pane, or peer out through a partially opaque lens. With them, although their vision may not be dim at close range, must be classed the "high myopes," victims of progressive near-sight, who are not only incapacitated for all blackboard or long range instruction, but are in danger, if they go on reading with their unfortunate noses out of ordinary school-books, of becoming permanently blind.

Such cases are rare. Their very rarity makes it easy to overlook them. But their rarity does not diminish at all the injustice to the luckless individual of allowing him to grow up without an education, or, what is little better, to try to worry along, befogged, and handicapped, in competition with full-sighted comrades in an ordinary school.

Educationally speaking, it is almost better to be born blind than to be born or to become semi-sighted. A blind child is reasonably sure of an education on which has been lavished the genius of the greatest educators of the world. His limitations will be tenderly allowed for and, so long at least as he remains a student, out of conflict with the world of seeing people, he will be happy. Dr Allen, of Perkins Institute, Boston, goes so far as to say that while they remain in school the greatest danger of blind students is an overweening conceit. So much is done for them. But your semi-sighted child is not, under existing conditions, allowed for at all. He is a calamitous drag upon any class to which he is attached, and he is lucky indeed if beside stupidity he does not have ascribed to him wilful carelessness and indolence as well. In sober fact he may well be fractious and ill-tempered; for the constant discouragement of falling behind his peers, and the rasping strain of attempting to do book and blackboard work with his distorted vision is extremely souring to the disposition. More than one head of a great reformatory has testified that bad

eyes have had much to do with landing many a young delinquent behind the bars.

The remedy is not as might be supposed, to send all semi-sighted children to existing schools for the blind. That is what has been done to some extent in the past, and it was the agitated protests of the heads of such schools which brought to light the peculiar problem of the semi-sighted. It seems that so long as a child can see at all, even the least little bit, he will persist in using his remnant of sight instead of helping on the education of the seeing fingers of the blind. Teach him to read Braille, and the instant the teacher's back is turned, he will stop reading with his fingers and begin to peer at the page, straining his poor eyes to make out the raised Braille point, mere white pin-pricks on white paper—ininitely harder to decipher by eye than the finest of black-and-white print. Thus what sight he has suffers and the whole object of blind-school work is defeated.

No, the semi-sighted must be dealt with in a class by themselves, a fact which appears to have seen the light in London in 1909. Two years later we hear of special-defective vision classes in Strassburg and Muhlhausen, and by 1913 the work was under way in Boston, New York and Cleveland, Ohio. Since then it has spread rapidly and at least in Massachusetts and Ohio is being introduced in the smaller cities. The Massachusetts Commission for the blind has been for five years at work investigating the school vision records of thousands of children and the conclusion reached is that about 4 per cent. of the school children of the state require special teaching on account of their eyes.

On three points all promoters of the work—foreign and American—are agreed: what little sight is left to these unfortunate children must be put under no strain; they must suffer no educational loss which ingenuity can make up to them on account of their defective vision; and while they will have to be taught in part by special methods and by the use of special devices, they must not be wholly separated from the normal world of the ordinary school—all oral work they should do in classes with full sighted children.

To take these points in inverse order, it should be noted that we hear not of schools for the semi-sighted, but of classes for conservation of vision. Wherever space in the school building will permit, the semi-sighted have a room to themselves for their work in reading, writing, and handicrafts, but go to the regular school-rooms to recite with boys and girls of their own age. The special room is almost a necessity, for semi-sighted children need special lighting conditions, generous blackboard room, and moveable desks to allow for free exercise. But as these children must make their way in the world in competition with seeing people, it is of great

importance that they should not be handicapped by the stigma of defectives, to say nothing of the social advantage of contact with normal children.

To give these children a fair educational chance they must have individual teaching. When they come to the class for the semi-sighted they are of all ages and all stages of educational attainments. Some of the largest are the most hopelessly behind. There is nothing for it but to begin with each child at the point where he is sure of his ground and then let him go ahead as fast as ever he can. Some of these children, notably the high myopes, are the reverse of stupid. They are likely to be of a very nervous, high-strung, responsive type, and when once they are put in possession of exercises which they can really see, they make amazingly rapid progress. In a few subjects, like geography, something like class work may be feasible, but for the most part each child "goes it alone." A "class" may be called in dictation, for example, but each member of that class may be at a different stage of development and may require a different exercise lined out for him, though all write at the same time. Home work is unthinkable. Fortunately the devoted teachers of these difficult classes have always the handicrafts to fall back upon. More than full-sighted children these little defectives need finger training of a sort that makes no demand on the eyes to teach them method, skill, and carefulness. So while the teacher hears James read, she directs William and Giovanni to bring out their desk-loom, or to put in a few "licks" on their chair-caning. Fortunately, too, part of the class is usually out of the room reciting with normal children. Rigid order does not have to be enforced in these small special groups, the children moving about almost at will so long as they make no disturbance.

But how spare the poor eyes? First by securing a room with ideal light and providing top and bottom curtains to shut out glare when the sun comes round. (In some cities extravagant care has been taken to cut out glare, walls being calcimined rather than painted, desk tops done over in "mat" surface, highly glazed exercise-paper rejected). Next all ordinary school books are discarded. The children must be taught to read from letters big and bold enough for them to see with ease.

The pioneer teachers have had a hard time providing bold typed lesson books. In Boston the first class depended upon lesson sheets written out by the teachers themselves in clear round script with letters an inch high. Little by little school books in huge type are being prepared by the printers. In the meantime in some cities exercises for the semi-sighted class are being turned out by the young printers in the vocational schools. London is teaching the older pupils among the semi-sighted to write out their own daily exercises with block type an

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inch to two inches high. These exercises are then utilized as permanent copy sheets for the teaching of the younger pupils.

So much for reading. Writing is never done bending over a desk. Wall blackboards are in constant use, supplemented by black-board cloth hung on rollers to give additional room. The children are taught to write a large round hand, using a free-arm movement, and very thick chalk with a square edge which makes a coarse white line. The children write rather low down on the boards to avoid the strain involved in looking high. In some cities each child has a small blackboard fixed at a proper slant to a rack on the front of his desk for writing at his seat. A free-arm motion is used precisely as at the wall board. London uses a special desk with convertible lid which is now a slanting blackboard and now a level table top for handicraft work. If paper is used at all it is unglazed and the pencil is a huge one with the thickest and blackest of soft leads. But such writing is frowned on because it makes the child bend his head over his work, sending the blood into his diseased eyes. Cleveland is ambitious. She reports the use of typewriters and a dictaphone to line out the exercises (since the children cannot afford the eye strain of copying from a printed page). The typewriters are operated by the touch system without any use of the eyes.

Figuring is everywhere done in bold fashion on the board. But since semi-sighted children have been cheated from babyhood of much of that wonderful free education that comes from simply seeing things in the streets or the fields, number work is put so far as possible in the concrete. Chicago reports the teaching of number relations by means of colored sticks and balls and actual measures, both wet and dry. In Boston I saw a little class playing store with a counterful of miniature advertising samples, cereals, etc,—making purchases, paying with "play-money" and carefully counting the change.

Geography offers a difficulty. Semi-sighted children cannot read ordinary schoolbook maps. It has been necessary to make special maps with bold thick outlines and the countries done in sharply contrasted colors. Sand and clay relief maps are a help. But the cleverest scheme is that reported from London. There they stretch on the floor big maps painted on scene-painters' canvas and the children stroll about over the countries, identifying mountains, lakes, rivers and cities, all marked in the blackest of black letters.

When it comes to manual training, sewing is cut out, unless indeed it can be taught by methods used with the totally blind. Cleveland teaches the girls to operate sewing machines without looking at their work. Drawing is done on the board with bold free strokes, or with charcoal on large sheets of paper pinned on the wall. It is always done standing, never with a fine pointed pencil and never in a stooping posture. Knitting with wool almost as coarse as a skipping rope upon wooden needles almost as thick as a swagger-stick can be done without eye strain, more especially as the pupil is trained to look at the work only when a snag is struck. Clay-modelling, reed-basketry, chair-caning, hammock-netting, bent iron-work, weaving on desk-looms, rough wood-working—these are some of the forms of hand-training most advocated. For the youngest children the Montessori didactic material is very valuable.

So far as I know, all the semi-sighted pupils thus far enrolled are still pursuing elementary branches, though some of them are big enough—poor things—to be out of the Three R's. Handicapped as they were, they have failed to get their removes with their class till they were an odd match indeed for the primers they could not see to master. Probably few of them will remain in school beyond the grammar grades. The problem of providing block-letter textbooks in all the histories and advanced scientific subjects would else prove baffling. But it is certainly by no means impossible to coach them sufficiently in the special classes so that they make up for lost time and graduate from the grades with full-sighted children not too far from their own age. That is, if their plight is early recognized and special train-

ing promptly begun. Superintendent Dwyer of Boston says that the progress of children to whom school has hitherto meant next to nothing is amazing.

Of what use to present all this to the attention of Canadian teachers in advance of any official action by the educational powers that be? What can the individual teachers do about it?

The individual teacher can set the ball a-rolling. Unless Canadian small fry are physically very different from their cousins in the States, there are enough semi-sighted children struggling along in the schools of each of your larger cities to call loudly for at least one special class. Cleveland has six such classes. Small American towns like Wellesley, Needham, Swampscott, Brookline, are discovered to have enough children with defective sight to need a special class. Through the country individual cases are scattered, some near enough to large cities to make it possible for the government to send them to special classes in town, some too isolated for such help. The proportion is probably not far from 4 per cent. of the school population.

Why do they not call for aid? Because the children themselves, never having known what it is to see normally, don't realize how cruelly they are handicapped, and because their teachers are not awake to the possibility of such handicap. Especially if her own sight is normal a teacher can be singularly blind to the difficulties of a pupil who can't see, as I know by bitter experience. I was fourteen before I discovered that I had a tenth only of normal sight and secured glasses which corrected my vision. My drawing teacher, a clever woman, now I think professor of Art at Mount Holyoke, dismissed me from her class as hopeless because I drew, forsooth! what I saw—the boldest outlines only, the highest lights, the deepest shadows—omitting all intermediate values. It never entered her mind that the fault might lie with my sight. Why, only the other day in Massachusetts they found four almost blind children trying to do regular work in two city schools!

First of all then, the individual teacher should scan her flock for evidences of poor sight. If the children's vision is regularly tested each year, let her remember that not infrequently a near-sighted child, clever and sensitive, will memorize the letters on the chart while full-sighted classmates are reading. This trick can be circumvented by the use of the International vision test—a chart of nine broken rings. With normal vision a child can tell the direction of a break at a distance of five meters. As the inspector points at random at one or other of these coarse black C's, it is impossible for the quickest child to evade the test by memorizing. Moreover this test may be used for children so young that they do not yet know their letters, and it is precisely these littlest

pupils who can be helped most mightily by the early discovery of their defective sight. (The International Vision Test is printed in the report for 1914 of the Massachusetts Commission for the Blind).

Tests are fallible. The conscientious teacher will learn almost more by watching the child. If there is scarring or disfigurement of the eye, if the child makes faces when trying to read, or even with glasses persists in hiding his book against his nose, or when reading from the board is forced to thrust his face close against it—then she should move heaven and earth to persuade that child's parents to take him to a skilful city oculist.

Sometimes no persuasion will overcome parental ignorance or inertia. The next step is to report that case to inspector or superintendent, or both. In so doing you will at least have called attention to the problem even if no immediate official action is possible. It will do no harm, certainly to ask that large-type readers and spellers be procured for use with that child. Failing these, a conscientious teacher will not give up. Realizing that a life-time of blindness may result unless the child's eyes are spared, she will cut out at once for him all work that calls for bending over a desk, or close eye attention. His writing lesson can be taken standing at the board, all his exercises may be written in chalk, and in place of written "home work" he may be required to come a half hour before school and do his examples or language work on the blackboard. In place of small print books he will read from lesson sheets written in a big round hand with a big soft-led pencil—sheets prepared by the long-suffering teacher or by some of the older pupils who will take pleasure in helping. Of course it will not be possible for the afflicted little one to read everything his classmates do; but enough copy can be prepared to teach him to read. Simplified maps may be made for his use by cutting the outlines of the countries from bright colored papers and pasting them on a contrasting background.

Incidentally the teacher who attempts the labor of love will have her reward. For the consciousness of the limitations of her poor little semi-sighted charge will tinge all her classroom work. She will satisfy herself less often with thrusting a book into the children's hands and saying "learn." Instead she will set herself really to teach.

Some day all the towns and cities will have their semi-sighted classes, afflicted little ones from the nearby countryside will go in to city centres to get an education which will not blind them, and the more scattered cases in remote country districts will perhaps be gathered in at schools like Fraser Institute where they will be taught the special methods different from those employed in educating the blind. That time is not yet. Till it comes

justice for these babes of misfortune rests with that creature of a thousand duties—"the schoolmarm."

#### HOW SHOULD SCHOOL GARDENS BE SUPPORTED

If gardens for children are worth while they are worth supporting. The one institution that has been developed for the education of children is the public school. School Gardening and Home Gardening, because they are fundamentally educative, should be supported out of the funds raised for public education. Thousands of school gardens have failed because they have had no adequate support. Every city in the country appropriates a number of dollars for each individual child to support instruction in spelling, yet very few cities as yet appropriate as many cents for a child to support school gardening. Yet the more the child learns of the wonderful realities of nature in its garden, the more he feels the pleasure in a growing plant; the more he exults over the beauty of the fragrant flower, the better he can think and the more surely he can learn to spell.

In every gardened school there should be at least one teacher who is able to teach the sciences and gardening. The equipment and supplies necessary for that work should be supplied directly by the Board of Education.  
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## RAMBLING TALKS.

(Address all correspondence for this column to Educational Review, Fredericton, N. B.)

It is strange how easily satisfied pupils are with the sounds of words. If they can pronounce a word, they are satisfied. Let the teacher recall how frequently pupils ask her to pronounce a word, and how unusual it is for a pupil to ask, "What does the word mean?" and she will see the point of what I am saying.

There is a hint here for us. We should not only help the pupils in their pronunciation, but carry it one step further, and see that they know the meaning of the word that they cannot pronounce. The pupil may not be able to give a good definition of a word, and yet know what it means. In such a case ask him to make a sentence in which the word is properly used. If he can do this, it would be satisfactory.

We must not take too much for granted, and think that because words are familiar to us they are also familiar to the children. A man once told me how surprised he was to find that "humid" meant "moist." He did not find it out until years after he left school. He had told his teachers many times that such-and-such a country had a humid climate, but he had always thought the word meant "warm."

Children are as curious about the meaning of words as they are about everything else. If this curiosity is encouraged, instead of repressed, they will not be satisfied with the mere sound of words.

A teacher recently wrote me asking this question: "Will you work problems in mathematics, like they do in some educational magazines?" My answer to this is both yes and no. I am willing to discuss the principles that underlie problems in mathematics, and even solve problems, if by so doing I can help the teacher teach better; but I am not willing to DO problems, if by DOING problems is meant juggling numbers, in order to get answers. I am aware that there are certain magazines that feature this kind of thing, but I believe that they are an injury rather than a help to the teacher. As teachers, we need inspiration, encouragement and help, but not that help that makes us mentally lazy.

In case I can throw any light on the teaching of any branch of mathematics, I am willing to do so. Of course there are some problems in our text-books that are merely riddles or puzzles. They should be known and avoided by the teacher. They are of no value—pedagogic or otherwise. I shall retain the right to reject any such problems that may be sent in.

## TO CORRESPONDENTS.

S. S.—I presume you have read what I have written above. I do not consider the question you submit as possessing much teaching value, but I shall discuss it

for two reasons. It is a good illustration of what I have been speaking about, and you say that you will come to it next month, and want to know how to teach it. The fact that you are planning your work a month ahead is laudable.

$$\text{Given } x + \frac{1}{x} = 2. \text{ Evaluate } x^3 + \frac{1}{x^3}$$

Now if we wished to DO the problem the easiest way, we would proceed thus:

$$x + \frac{1}{x} = 2$$

$$\text{Clear of fractions: } x^2 + 1 = 2x$$

$$\text{transposing: } x^2 - 2x + 1 = 0$$

$$\text{solving: } x = 1$$

$$\text{then } x^3 + \frac{1}{x^3} = 1 + 1 = 2$$

The above method possesses little teaching value. Ask the pupils what they must do, or could do, with

$$x + \frac{1}{x} \text{ to give at least some of the terms in}$$

$x^3 + \frac{1}{x^3}$ . The answer is obvious. It must be cubed.

$$\text{Now: } x + \frac{1}{x} = 2$$

$$\text{cubing: } x^3 + 3x + \frac{3}{x} + \frac{1}{x^3} = 8$$

$$\text{re-arranging: } x^3 + \frac{1}{x^3} + 3x + \frac{3}{x} = 8$$

$$\text{also: } x^3 + \frac{1}{x^3} + 3\left(x + \frac{1}{x}\right) = 8$$

$$\text{But } 3\left(x + \frac{1}{x}\right) = 3 \times 2 = 6$$

$$\text{then } x^3 + \frac{1}{x^3} + 6 = 8$$

$$\text{transposing: } x^3 + \frac{1}{x^3} = 2.$$

Again: Point out to the pupils that the expression  $x^3 + \frac{1}{x^3}$  is the sum of two cubes, and is factorable.

$$\text{Factoring: } x^3 + \frac{1}{x^3} = \left(x + \frac{1}{x}\right)\left(x^2 - 1 + \frac{1}{x^2}\right)$$

Now we know the value of  $x + \frac{1}{x}$  and if we knew the value of  $x^2 - 1 + \frac{1}{x^2}$ , we could write down the value of  $x^3 + \frac{1}{x^3}$ .

$$\text{Let us get a value for } x^2 - 1 + \frac{1}{x^2}$$

$$\text{Given: } x + \frac{1}{x} = 2$$

$$\text{Squaring: } x^2 + 2 + \frac{1}{x^2} = 4$$

Subtract 3 from both sides of this equation,

$$\text{then: } x^2 - 1 + \frac{1}{x^2} = 1$$

$$\text{so that: } \left(x + \frac{1}{x}\right) \left(x^2 - 1 + \frac{1}{x^2}\right) = 2 \times 1 = 2$$

$$\text{therefore: } x^3 + \frac{1}{x^3} = 2$$

E. R.

#### A VICTORY LOAN CATECHISM

Q. What is the Victory Loan, 1918? A. It is Canada's Second Victory Loan and fifth war loan.

Q. What is a Victory Bond? A. It is the promise of the Dominion of Canada to repay the lender the sum named upon it at the time stated.

Q. What security stands behind this bond? A. The entire assets and wealth of the Dominion of Canada.

Q. When was the last Victory Loan raised? A. In November, 1917, when \$420,000,000 was subscribed.

Q. What became of that money? A. It was used to prosecute Canada's part in the war and to finance and carry on great industries at home.

Q. For example? A. Millions were spent in raising, equipping, and sending forth the Canadian reinforcements.

Q. How was the money spent at home? A. In many ways. The British Government was given large credits and out of these great orders were placed in Canada for munitions, wheat, spruce, salmon and other things needed by the army.

Q. Why did Great Britain need these advances from Canada? A. They were needed to offset Britain's advances to Canada in army expenses overseas.

Q. How does the loan effect the people of Canada? A. Without it our war effort would collapse, our industries would suffer a great break-down, our manufacturers and farmers alike would lose their foreign market.

Q. What has the loan done for the farmer? A. It has bought the greater part of the wheat crop, and provided a market at good prices for his dairy and animal products.

Q. What would happen to these products without the loan? A. Most of the wheat would have been unsold, the price would have been greatly reduced, and the cheese and bacon would have been a drug in the market.

Q. How has the loan established any new industries? A. It has revived shipbuilding and created new and bustling ship-yards on the shores of the St. Lawrence and the Great Lakes. It has brought into being great plants for the making of aircraft.

Q. What do these mean to the country? A. The employment of thousands of well-paid men and women, and their development into highly skilled workers.

Q. Does the loan reach widely in the distribution

of the money? A. It reaches virtually everybody in Canada. All the great industries are benefited, while the financial and mercantile classes all reap their share as middlemen.

Q. Why is it necessary to raise the loan in Canada? A. Because there is no other place to raise it. Our Allies are burdened to the limit, and we must carry our own load.

Q. Why is Germany fighting? A. To dominate the world and crush civilization under her cruel militarism. General Von Bernhardt wrote years ago: "Our next war will be fought for the highest interest of our country and mankind. World power or downfall will be our rallying cry."

Q. Why is Canada fighting? A. To save herself and civilization from this dastardly attack on the world's liberty.

Q. What part has money in this fight? A. While armies of men are indispensable, no country can make war without "silver bullets."—*The Beacon*.

#### CURRENT ITEMS

A report from the Hungarian capital states that as Count Stephen Tisza, the former Hungarian Premier, was leaving the Lower House of Parliament at Budapest, on October 15th, a youth approached his motor with a revolver for the supposed purpose of shooting the Count. The would-be assassin was struck down by the Count's chauffeur before he was able to fire.

The Frasers, Limited, have about completed at Edmundston, N. B., a sulphite mill which will be the second largest in America and will have a capacity of 140 tons a day.

The Japanese steamer *Hirano Maru*, outward bound from a British port to Japan, has been torpedoed, and it is feared 300 lives have been lost.

A collision recently occurred off the South Scottish Coast between the transport *Otranto* and the steamer *Kashmir*. The *Otranto* was dashed to pieces on the rocks after the collision and more than 300 American soldiers are said to have been lost.

A disastrous forest fire spread over northern Wisconsin and northern Minnesota on October 14th and 15th causing great loss of life and property. More than 500 persons were reported missing and at least 1200 were made homeless by it. The towns of Cloquet, Brookston, Corona, Adolph, Thompson, Arnold, Moose Lake and Wright were destroyed according to reports. The property and timber losses it is said will amount to \$100,000,000—insurance \$23,000,000.

The Finnish Government has asked Germany to withdraw her troops from Finland. Finland was recently declared an independent country, but has been under the influence of Germany. The Republicans and Socialists are said to favor an approach to the Entente Governments.

The U. S. fourth Liberty Loan was a great success. The objective was \$6,000,000,000, but a much larger amount was subscribed. New York City, the allotment of which was \$1,800,000,000, exceeded the amount asked for by over \$200,000,000.

Sir Thomas Shaughnessy has retired from the presidency of the Canadian Pacific Railway Co. Mr. E. W. Beatty, who has been vice-president of the company, has been elected president.

The Dublin mail boat *Linster* was torpedoed about October 10th, on a trip from Dublin to Holyhead. Four hundred and eighty persons are believed to have perished.

King George has donated £10,000 to the Canadian Red Cross Society.

Sir P. E. LeBlanc, Lieutenant-Governor of the Province of Quebec, died October 18th.

Sir Charles Fitzpatrick has resigned as Chief Justice of the Supreme Court of Canada, and has been appointed Lieutenant-Governor of the Province of Quebec in succession to the late Sir Evariste LeBlanc.

Sir Louis Davies, a Judge of the Supreme Court of Canada, has been appointed Chief Justice of the Supreme Court of Canada.

Master—"If a customer comes and wants to look at a piano, flute or mandolin while I'm at lunch, you know what to show him?"

Boy—"Yes, sir."

Master—"And if a customer wants to see a lyre?"

Boy—"I'll send for you at once, sir."

A writer in the *New Republic* tells of a girl who defines aesthetic as something to kill cats with, illustrating by this sentence, "We gave the cat an aesthetic."

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**METHODS FOR TEACHING FRACTIONS**

Inspector Amos O'Brien, M.A.

In the following methods for teaching fractions I am attempting to show how by simple means pupils may be led to deduce the various principles and rules used in applying fractions.

Many teachers may believe that to give the rules without seeking for reasons will save time and give the same results.

From a long experience in teaching and inspecting schools, I am convinced that time spent in finding reasons for the various fundamental principles and operations in arithmetic saves time in the more advanced grades.

Too many of us are satisfied to take on faith the rules we use without troubling ourselves about the reasons for them.

Even young children take delight in being led to discover reasons for themselves.

As attention depends so largely on interest, the time thus spent is not wasted if it helps to cultivate the habit of attention.

In the following outlines the questions and answers given are only suggestive as each teacher must vary the questions to suit the class. A great many examples should be used before any principle or rule is given. Frequent reviews of the principles and rules should be given as the work proceeds.

Before applying the rules in written work give an abundance of oral or mental work using small numbers.

Most children when they reach the grade in which the teaching of fractions is required know what is meant by the term one-half, can get the half of objects such as apples, strings, crayons of chalk, etc., and can express one-half in figures thus  $\frac{1}{2}$ .

Take some object that is easily broken, say a crayon of chalk, and ask the class to tell you what you must do in order to get one-half of the object.

The answer, as I have heard it from hundreds of classes and even from teachers at a Teachers' Institute, will be: Break it in two.

Break it into a short and a long piece and thus teach them to be more exact in their expression. They will next tell you to break it in two in the middle. Lead them to use some such expression as: Divide the chalk, or whatever it may be, into two equal parts.

Place both pieces on the table and tell them you want one-half of the object. They will tell you to take one piece. By questioning them you may secure some such expression as the following: To get one-half of any object, divide the object into two equal parts and take one part. Ask some pupil to place the fraction one-half on the board: thus  $\frac{1}{2}$ . Question them until they see that the figure below the line tells into how many

equal parts the object is divided, and the figure above the line tells how many parts are taken. Here teach the use of the terms numerator and denominator. Next, place a number of fractions such as  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ,  $\frac{1}{16}$ , etc., on the board. Question until they can tell how to get any of those fractions of an object, or in fact any fraction of an object. Thus taking  $\frac{3}{8}$  they should be able to tell you to divide the object into eight equal parts and to take three of the parts.

To teach the reading of fractions take any fraction, say  $\frac{1}{7}$ . Point to the denominator and tell them the parts are called sevenths. They should then be able to name the parts in any fraction, thus in  $\frac{3}{8}$  they would call the parts eighths, in  $\frac{1}{9}$  they would call the parts ninths. Use a variety of objects, such as strings, sticks, lines on the board, etc., and have them divided by the pupils into such parts as fourths, sixths, etc. Take a stick, say eight inches long, and ask a pupil to cut it into eight equal parts. Hold up one part and ask what fraction of the stick you have. The answer should be one-eighth. Have it written thus  $\frac{1}{8}$ . Proceed in the same way with two, three or more pieces, have them placed on the board thus  $\frac{1}{8}$ ,  $\frac{1}{8}$ , etc., and read. Deal in the same way with other fractions until any fraction you may place on the board can be read. In the case of halves and thirds the names of the parts must be told if not known at the beginning.

In the beginning if you use lines on the board or sticks for the pupils to divide, use a number of inches that is a multiple of the denominator. If you want fifths of a line use a line that is 5 in., 10 in., 15 in., or some number of inches that is a multiple of five.

Ask the class how to get  $\frac{1}{4}$  of a stick which is 14 inches long and have it in one piece.

Some may be able to tell you.

For those who cannot tell, question somewhat as follows. Q. How long is the stick? A. 14 inches. Q. Into how many equal parts should it be divided? A. 7 equal parts.

Q. How long should each part be? A. 2 in.

Q. How many such parts are to be taken? A. 5.

Q. How long would the five parts be if they were left in one piece? A. 10 in.

In the same way find  $\frac{5}{8}$  of 24 apples;  $\frac{3}{4}$  of 20 cents, etc., until the whole class can find any fraction of any number not involving fractions in the division.

To teach the use of the terms proper fraction, improper fraction and mixed number: Take a number of sticks each 12 in. long. Divide each stick into quarters. Tell them that the meaning of the word fraction of anything is one or more equal pieces broken off of that thing, but not the whole. Ask one pupil to take three

pieces, another four, another five, and let each pupil place on the board the figures that represents what he has, thus  $\frac{1}{4}, \frac{1}{4}, \frac{1}{4}$ . Lead them to see that the one with  $\frac{1}{4}$  has the whole stick and therefore not a fraction of it, and that the one with  $\frac{1}{4}$  has the whole of one stick and a piece of another and therefore not the fraction of a stick.

Tell them that as it has been found very convenient to use the expressions  $\frac{1}{4}, \frac{1}{4}$  in performing the various operations with fractions they have been called improper fractions, and the other proper fractions.

Ask a pupil to take eleven quarters and to write the fraction on the board thus  $\frac{11}{4}$ . Ask the pupils to place enough quarters in line to make a whole stick and to do this as often as they can from the  $\frac{11}{4}$ . They will find they can do that twice and have three-quarters left: thus  $\frac{11}{4} = 2 \frac{3}{4}$ .

Get them to imagine they have a number of apples on the table all of the same size and shape. Imagine each apple to be cut into the same number of equal pieces, say eight. Put in imagination, say 29 pieces in one pile and place the fraction  $\frac{29}{8}$  on the board.

Q. What have we in this pile? A.  $\frac{29}{8}$ .

Q. How many eighths must be stuck together to make a whole apple? A. 8.

Q. How many times can eight pieces be stuck together out of the 29 pieces? A. 3 times.

Q. How many whole apples can be made out of the  $\frac{29}{8}$ ? A. 3.

Q. How many eights will be used in making the three whole apples? A. 24.

Q. How many eighths will be left? A.  $\frac{5}{8}$ .

Q. What is  $\frac{29}{8}$  equal to? A.  $3 \frac{5}{8}$ .

Q. What is  $\frac{29}{8}$  equal to? A. 4.

Q. What is  $\frac{29}{8}$  equal to? A.  $5 \frac{1}{8}$ .

Q. What is  $\frac{29}{8}$  equal to? A.  $3 \frac{5}{8} = 7$ .

Q. Give rule for finding the value of an improper fraction? A. Divide the numerator by the denominator.

Tell them that a whole number and a fraction together is called a mixed number; thus  $3 \frac{5}{8}$  is a mixed number. Ask them to imagine they have 6 whole apples and  $\frac{1}{4}$  of another apple, and express the quantity on the board thus  $6 \frac{1}{4}$  apples. Ask them to divide each of the six apples into fifths. Q. How many fifths in one apple? A. 5. Q. How many fifths in 6 apples? A. 30. Q. If the four-fifths are put with the 30 fifths how many fifths will there be? A.  $34 \frac{1}{5}$ .  $6 \frac{1}{4} = \frac{25}{4}$ .

By using a number of examples lead the pupil to the rule for reducing mixed numbers to improper frac-

tions, thus: Multiply together the whole number and the denominator of the fraction and add in the numerator of the fraction. Use that number for the numerator of the improper fraction and use the denominator of the fractional part for the denominator.

(To be continued)

#### SCHOOL AND COLLEGE

Col. A. H. Borden and Mrs. Borden were here on Monday night, guests at the Stanley. They went on to Amherst.—*Colchester Sun, Truro.*

Col. Borden was formerly Inspector of Cadets and Director of Physical Training in the Maritime Provinces.

Miss Florence G. Justason, formerly of the Fairville, N. B., school staff, is now teaching at Flaxcombe, Sask.

Miss Mary Nicholson, of Harrington, P. E. I., has accepted a situation as teacher at Hanna, Alberta.

The school fair held at Mt. Stewart on September 30th was a decided success. The day being fine there was a large attendance but a great many farmers were unable to be present owing to the unusually busy season of the year; however, Glenroy, St. Andrews, Pisquid East and West and Mt. Stewart were well represented. A pleasing feature of the occasion was a grand parade of school pupils and decorated vans which marched from the school house to the commodion hall, which was beautifully decorated for the occasion and well laden with agricultural exhibits consisting of different varieties of grain, vegetables, flowers and fruit and fancy work, etc. The formal opening of the fair took place about 2.30 p. m., Rev. Mr. Murray presiding, and speeches were delivered by Inspector Cairns and Mr. Mitchell, Charlottetown, on the educational value of the fair. The judges were Messrs. McMillan and Mitchell and Miss McKenna. Visitors from the city, Miss Messervy, and Mr. McCarron and Miss McKenna. About four o'clock in the afternoon teachers, visitors and pupils repaired to Mr. Partridge's grounds where races and other amusements were indulged in. This school fair reflects great credit on the teachers, Misses Webster, Fraser, Pigott, McKenzie and McDonald and the school committee who one and all were untiring in their efforts to promote the affair. There was no Banker's competition nevertheless a number exhibited live stock and poultry.—*Charlottetown Guardian.*

Mr. R. B. Masterton, formerly a teacher in New Brunswick, is now principal of a school in Greenwood, British Columbia.

Mr. A. D. Jonah is now entering upon his fourth

year as principal of the Florenceville Consolidated school. In the High School Leaving Examinations last July, one of Mr. Jonah's pupils led the province, attesting to the good work being done by the principal.

Miss Helen V. Burnett, formerly on the St. Stephen, N. B., school staff, is now teaching in North Battleford, Sask.

Mr. W. J. S. Myles, M.A., principal of St. John High School, recently spent a few days in Fredericton visiting friends.

Mrs. Susie A. Ryan, formerly a teacher in Carleton County, N. B., is now engaged teaching at Chu Chua, B. C.

The many friends of Miss Mary Callaghan, for the past two years principal of Emyvale School, will be pleased to learn of her promotion to a civil service position at Ottawa. Miss Callaghan is a self-taught student and successful candidate in the civil service examinations last spring and deservedly merits the position. She left for Ottawa last week where she enters on her new duties at once.—*Charlottetown Guardian*.

Twenty academy and high school boys turned out last Saturday to pull mangels at the government farm, Bible Hill. The boys pulled 2,500 bushels, and, with the aid of college teams, hauled in 2,300 bushels. One acre gave the immense yield of 1,466 bushels.—*Colchester Sun*.

Capt. A. S. McFarlane, secretary of the Strathcona Trust for New Brunswick, has announced the following teachers winners of Physical Training prizes for Inspectorial District No. 8:—

Graded—1st, Miss Helen Mulherrin, Woodstock Public School; 2nd, Mr. Dyson W. Wallace, B. A., Woodstock Grammar School.

Rural—1st, Miss Lottie M. VanWart, Beaufort; 2nd Mr. Leonard J. Slipp, Glassville.

Semi-Rural—1st, Miss Margaret J. Baird, Benton Superior; 2nd, Miss Isabel A. Thomas, B. A., Andover Grammar School.

Mr. F. B. Meagher, M. A., Inspector, Woodstock, N. B.

Miss Anna Jackson B.A., principal of Milltown, N. B., Superior School, and Miss Isabel A. Thomas, B.A., principal of St. Stephen, N. B. High School, are visiting their homes in Fredericton while their schools are closed by the health departments.

The Dominion Educational Association, which was scheduled to meet in Ottawa on November 5th and 6th, has been postponed to November 20-22 on account of the epidemic of Spanish influenza.

The Carleton-Victoria Counties Teachers' Institute, which was to be held at Woodstock, N. B., on October 17th and 18th, has been postponed on account of the order of the Provincial Health Department forbidding public gatherings. The Kings Co. Teachers' Institute has also been postponed.

Miss Laura B. White passed away at the home of her parents, Marysville, N. B., on October 18th. Miss White was formerly on the staff of the Marysville schools. Later she taught some years in the West.

Mt. Allison Academy and Commercial College opened this year with a larger attendance than they have had since the war began. This increased attendance is not only in students boarding in the academy residence, but the increase is especially marked in the shorthand department where there are over 100 students enrolled. Dr. James M. Palmer is principal.

#### NO CASE

Employe—"I've just been married, sir, and would like a raise in my salary."

Employer—"Sorry, young man, but we aren't responsible for accidents unless they happen in the works."

Doris was rather backward in her studies, and one day when her father was enquiring into her standing at school the little girl admitted she was the lowest in her class. "Why, Doris, I am ashamed of you," exclaimed the mother; "why don't you study harder and try and get away from the foot of the class?" "It ain't my fault," replied Doris, in tones of injured innocence, "the little girl who has always been at the foot has left school." — *The School*.

During the coming weeks reminders will be sent to subscribers in the form of statements which we trust will be kindly received and duly considered. Errors, if made, should be promptly brought to our notice so that they may be corrected.

The poem entitled "Mother Ryder's Goose," by John Clair Minot, in our last issue, should have been credited to *The Youth's Companion*. The omission was due to a combination of oversight with a printer's error.

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### OFFICIAL NOTICES

The New Brunswick High School Algebra (Crawford) prescribed by the Board of Education to take the place of Todhunter & Loney's Algebra from and after July 1, 1918, will be allotted among the several grades as follows:

- Grade VII.—Chapters I to IV, inclusive.
- Grade VIII.—Chapters 1 to X, inclusive, omitting Chapters VII and IX with applications.
- Grade IX.—Chapters I to XII, inclusive.
- Grade X.—Chapters I to XVI, inclusive.
- Grade XI.—Chapters I to XXII, inclusive.
- Latin—Grades XI and XII, Allen's Latin Grammar (Clarendon Press) as a book of reference.

W. S. CARTER,  
Chief Superintendent of Education.

### SCHOOLS CLOSED BY ORDER OF BOARD OF HEALTH

In accordance with the provisions of Section 122, School Manual, all Teachers, whose schools have been closed by order of the Board of Health, shall receive the usual Provincial Grants, and shall be paid by the trustees of the district at the rate of salary stated in their contracts, for the time the schools shall have been closed, not exceeding three months.

W. S. CARTER,  
Chief Superintendent of Education.  
Education Office, Fredericton, N. B.  
Oct. 23rd, 1918.

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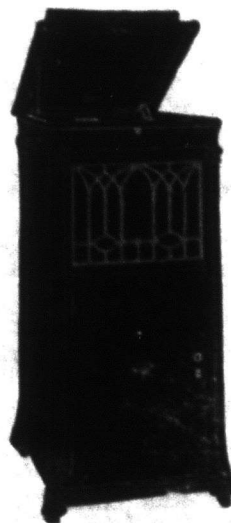
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**OFFICIAL NOTICE**

**New Brunswick School Calendar**

1918 — 1919

- 1918 FIRST TERM**
- Dec. 10—Normal School Entrance Examinations for French Department begin.
  - Dec. 17—Third Class License Examinations begin.
  - Dec. 20—Normal and Public Schools close for Xmas Holidays.
- 1919 SECOND TERM**
- Jan. 6—Normal and Public Schools re-open after Xmas Holidays.
  - Apr. 17—Schools close for Easter Holidays.
  - Apr. 23—Schools re-open after Easter.
  - May 19—Observed as Loyalist Day in St. John Schools only.
  - May 23—Empire Day.
  - May 24—Last day on which Inspectors are authorized to receive applications for July Examinations.
  - May 26—Observed as Victoria Day (School Holiday).
  - May 27—Class III License Examinations begin (French Dept).
  - June 3—King's Birthday. (Public Holiday).
  - June 6—Normal School closes.
  - June 10—License Examinations begin.
  - June 16—High School Entrance Examinations begin.
  - June 27—Public Schools close.



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