

PAGES

MISSING

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THE EDUCATIONAL REVIEW,
St. John, N. B.

EMPIRE DAY.

In a few more days the Dominion will be called upon to observe the third Empire Day since the beginning of the great war, the war in which the British Empire is found locked in a life or death struggle with the most powerful military nation in the world.

In view of the fearful sacrifices which have already been made and realizing that before

militant Germany is crushed, untold sacrifice will still further be called for, it is very apparent that this forthcoming Empire Day should be observed with the gravest solemnity, and in the most sober spirit of national devotion. To think of any other than a united empire at the present time, when thousands of Britain's sons, rallying from the four winds of the heavens, have already laid down their lives in the fight for civilization, freedom, and a lasting peace, is inconceivable.

It is for this reason that we again approach our Empire Day with the deepest sorrow for the fallen, sympathy for the wounded and solace for the suffering bereaved, but when these days of tremendous sacrifice and sore tribulation have passed and when our dead have been mourned for and our heroes honored we shall again be called upon to observe another Empire Day, with a bitter and lawless Germany, brought under subjection and restraint, and the menace of a great world slavery forever removed.

Meanwhile let us, whether young or old, pupil or professor ring out the watch words of the Empire movement — responsibility, duty, sympathy, and self sacrifice — to every subject of our gracious King George, throughout his vast and loyal dominion, and in the words of the late, Earl Kitchener, let us as a United Nation "Carry On."

BETWEEN OURSELVES.

We regret that owing to pressure on our space caused by inclusion of the special articles dealing with Empire Day and Arbor Day, the article written by Miss M. Jennison on the Junior High School, has had to be held over, we trust, however, that same will be included in our next issue.

Several of our subscribers have written to us recently with regard to the date in the month upon which the REVIEW has always been published, and stating that before they receive their copies many of the current articles are hardly practicable. We have given the matter our careful attention,

and beginning with the August number, we purpose publishing in future on the last day in each month, in other words the August number will be published on July 31. This will not only enable seasonable monthly articles to be inserted but they will be of practical use early in each month.

On another page in this issue will be found particulars of a most interesting competition, the prizes in which will amount to \$50.00. We make no apologies for including contests in the pages of the REVIEW, although it has not hitherto been the rule, as we feel that such, introduced judiciously will prove an attractive feature affording as it does a little recreation amidst hours of teaching and study.

Should the competition as given this month bring the results expected, we plan to include another in the August number and if possible hope to increase the value of the prizes considerably.

THE TRAINING OF THE FEEBLE MINDED.

In recent educational conventions if there is one subject that has received more attention than another, and which has been discussed with unusual plainness of speech, it is that of the presence of sub-normal pupils in the public schools as affecting the public educational system. There are two aspects of the problem worthy of prompt and continuous attention; the useless expense caused by the presence of feeble minded children in the schools and the injustice inflicted on other children, whose educational progress is retarded by the inability of the sub-normal pupils to keep pace with the grades in which they may be enrolled.

Not only should the pupils be separated but there should be absolute distinction in the sexes, if the present and ever increasing menace to society is to be averted. In a recent address delivered by Dr. C. K. Clarke before the Ontario Educational Association, he told us of what had happened one day at the psychiatric clinic at the Toronto General Hospital when twenty-two children between the ages of sixteen and infancy were examined. "The majority were feeble-minded; some were insane and some were backward owing to unfortunate environment, while others were quite normal, with a mark of interrogation after them. The first patient was a girl of fifteen, pretty and

attractive, but absolutely without any sense of morality. She had come from the Juvenile Court, and proved quite unmanageable at home, and already had strayed from the path of virtue. A careful physical examination revealed the fact that she had many of the stigmata of degeneracy, and was, in fact, hopeless from a social standpoint. The average observer would say, "What an attractive, pleasant girl;" the trained observer would soon recognize that the only hope for the child was to be cared for in an institution, for life, where she would be happy and safe.

"The second girl examined had a similar history. She was a typical English defective, sent out to Canada to develop what nature and heredity had denied her — a properly developed brain."

"Another case was that of a girl of fifteen, in the junior second book, who had already married two soldiers, both alive at present. One wonders how clergymen could be found to undertake the wedding ceremony when the girl was obviously under age and just as obviously defective."

These few facts which are only samples of what is taking place in a lesser or greater degree all around us, enforce the reason for finding some remedy in the way of segregation.

CURRENT HISTORY CLASS.

1. Where was an important Allied Conference held recently?
2. What King has thought of abdicating?
3. What nation has been asked to cut its ration by 25%?
4. Give the population of the Allied Countries as against those in the Germanic Alliance?
5. What is proving a serious menace to Britain?

ANSWERS TO LAST MONTH'S QUESTIONS.

1. Russia.
2. Russia and Britain, north of Bagdad.
3. The United States.
4. Between Ypres and Chaonne.
5. Miss Stevenson, Lloyd George.

Last month's REVIEW failed to reach me, please forward another copy, as I highly value every issue, and could not do without same.—
M. R. T., Fredericton.

PLANT LIFE.

H. G. P.

MOSSES.

The most widely known moss throughout Eastern Canada is without doubt the one given in the accompanying illustration, the Common Hair-cap Moss, known also as Bird Wheat and Pigeon Wheat. This moss grows abundantly in dark green masses in old meadows and pasture lands, and in common with most mosses is subject to great extremes of

moisture and dryness. When there is an abundance of moisture in the soil the leaves are spread out like those in the illustration, but during dry seasons they cling closely to the stem, and in this way diminish evaporation.

Search for this moss during spring and early summer. How are the leaves arranged? Keep it in mind and note its appearance during the dry spells of late summer.

The conspicuous part of the moss consists of the leafy upright stem. At this time of year many of the plants terminate in rosettes of modified or colored leaves, surrounding clusters of antheridia, elongated structures, that upon maturity produce great numbers of motile reproductive bodies called sperms.

THE COMMON HAIR-CAP MOSS (*Polypodium commune*).

A, plant with a rosette tip, bearing antheridia. B, plant with sporophyte. Cal, cap, calyptra, over the developing spore case. C, a mature spore case with calyptra removed.

Illustration copied from Principles of Botany, by permission of the publishers, Ginn & Co., Boston, Mass.

The antheridia are very small, and can be made out only in thin sections under a microscope, and the sperms being much smaller require very high magnification.

Other plants with terminal upright leaves produce archegonia at the end, very similar to those of the fern, (See REVIEW, March, p. 202),

but with much longer necks. About the time that the neck opens the egg is mature at the bottom of the archegonium; and fertilization takes place in the same way as in the fern, by the union of a sperm with the egg. Growth begins at once, and, as in the fern, results in a new phase in the life cycle of the plant. It will be remembered that in the fern this new phase very early establishes root connection with the ground, and soon becomes an independent plant, but in our moss no root ever develops; the new plantlet receives its food by way of its foot embedded in the tissues of the leafy moss plant, already described — the gamete bearer, the gametophyte. The growing plantlet elongates rapidly and carries up the upper part of the archegonium as a hairy cap, called the calyptra; hence the name, Hair-cap Moss. This plantlet never produces leaves, but depends almost entirely upon the leafy moss plant for its food, *i. e.*, lives a parasitic life upon the gametophyte. At the upper end under the calyptra a capsule forms, which, upon maturity, opens by a lid-like cover at the top; and throws out a great number of very small spores, from which grow the leafy moss plants.

The phase that produces the capsule with its spores is the sporophyte. Compare this sporophyte with that of the fern.

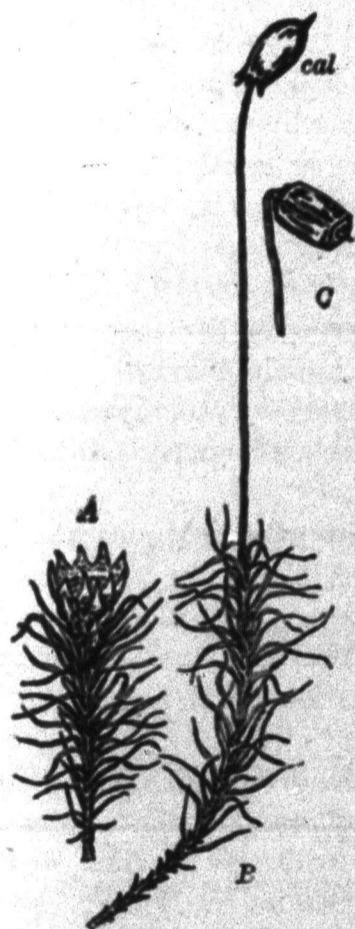
The sporophyte is a conspicuous phase of the Common Hair-cap Moss during July and August. The old ones occasionally found during the spring are left overs from the preceding summer.

Diagram the life cycle of this plant on the blackboard. Note that the gametophyte is the strong vegetative phase in the life cycle, and for that reason might be designated the more important phase or generation.

Which is the chief vegetative phase among the ferns?

Other mosses are common everywhere, and many of them during May and June show both phases of plant life. You will find many interesting forms if you inspect closely the stone fences, mossy banks, etc., during your spring rambles.

The Peat Mosses or Sphagnum Mosses are found in wet situations, in bogs and by the borders of some lakes and ponds. They grow in dense masses, and are light green in color, with the exposed portion often tinged with red. "The plants (gametophytes) have long stems, with delicate, leafy branches, some of which grow



downward and suck up water, while the rest form a dense cluster at the top. The peculiar structure of these mosses allows them to absorb and hold water like a sponge, for which reason they are used by gardeners for packing around plants and flowers." This moss has, during the present war, been used as a substitute for absorbent cotton in the hospitals in Europe.

The sporophytes of the Sphagnum Mosses develop during July, but are not plentiful. Collect specimens and read up an account of this moss in some good textbook on Botany.

The mosses comprise a large class of plants, over 12,000 different species have been described and named. See book notice, on another page of the REVIEW, for description of a work that names and describes the common mosses of the Acadian Region.

CLUB MOSSES.

There is subject matter for several interesting lessons in plant development in the study of mosses and ferns, and many other points of interest arise when we direct our attention to the Club Mosses and their allies.

The Club Mosses belong to the genus *Lycopodium*, and are represented in our region by about thirteen species and varieties. They are all low plants, of moss-like appearance, with elongated prostrate stems, often much branched, clothed with small persistent leaves, and either trailing along the surface of the ground as in the case of the Common Club Moss, *Lycopodium clavatum*, or just beneath the surface, not more than three or four inches at most, as in *Lycopodium obscurum*.

In the axil of the leaves, either the ordinary leaves or specialized ones, set apart in zones or spikes for that purpose, the sporangia with numerous spores are produced. From this fact we conclude that this leafy plant is the sporophyte phase of the Club Moss.

The spores mature about midsummer, and are very abundant. In the mass they form an inflammable fine yellow powder, known as vegetable brimstone and lycopodium powder, which is used in pharmacy and in the manufacture of fireworks.

The spores produce small, very obscure, gametophytes, which in turn, through the union of their gametes, eggs and sperms, give rise to the sporophyte phase—the main vegetative phase or generation in the life cycle of this plant.

The following is a list of our native Club Mosses, named according to Gray's New Manual of Botany. We trust it may help students of Botany to a further study of this interesting group of plants, and lead them to note carefully the degree of specialization among the leaves in the matter of spore production.

*Lycopodium Selago** L.,—local. Leaves *uniform*, spore cases arranged in zones from near the base to near the apex, with sterile regions intervening.*

L. lucidulum Michx.,—common. Leaves *slightly differentiated*; in zones, alternately shorter and longer; the shorter bearing the spore cases.

L. inundatum L.,—local. Spore cases only in the axils of the upper leaves, forming a spike, with the fertile scarcely or not at all modified. Plants growing in low marshy ground as its specific name indicates.

L. annotinum L.,—common. Leaves with spore cases forming a spike, scale-like and yellowish, very different from its foliage leaves. Creeping stem very near the surface of the ground, the numerous upright branches mostly simple or sparingly forked.

L. obscurum L.,—common. Much like the last, but creeping stem deeper in the ground, the few upright branches divided. When the upright branches are repeatedly forked and tree like, and uniformly leafy on all sides, the plant is a variety of the last,—

L. obscurum L., var. *dendroideum* D. C. Eaton.

L. clavatum L.,—common. Stem creeping, fertile branches bearing from two to four slender cylindrical spike, on a slender peduncle. When the peduncle bears but one spike it is the variety.

L. clavatum L., var. *monostachyon* Grev & Hook.,—local.

L. complanatum L.,—local. Creeping stem at or near the surface of the ground; upright stems irregularly branched or forked, very flat, few forked; the fertile branches bearing peduncles with one to three erect spikes.

When the branches are "bright green, and several-forked, and spreading in a fan-like manner and the peduncles mostly four spiked, it is the variety,

L. complanatum L., var. *flabelliforme* Fernald — common.

The following forms are also said to be in our region, but the writer has not found them:

- L. annotinum L., var. pungens Derv., — local.
- L. stichense Rupr., — local, in the upper St. John river districts.
- L. sabinaefolium Willd., — local.
- L. tristachyum Pursh.

*“At the zone of transition from the sterile to the fertile regions (in *Lycopodium Selago*) imperfectly developed, aborted, spore cases are often found, and this with other evidence has suggested that, *in the evolution of the sporophyte the purely vegetative regions have resulted from a sterilization of fertile tissue.*” The possession of sterile leaves, foliage leaves, for the manufacture of food, and the restriction of leaves bearing spore cases, sporophylls, to the apices of the branches is of advantage to the plant; and, furthermore, a knowledge of the development of these conditions directs us away from the old theory enunciated by Wolff in 1770, and again stated by Goethe in 1790, that the sporophylls, floral leaves, are derived from foliage leaves; and points us in the very opposite direction, to a theory that holds that foliage leaves have been derived from sporophylls, through a process of sterilization.

SUGGESTED PROGRAM OF STUDIES OUTLINES.

Secondary Section.

At the Collegiate Institute, Principal J. A. Snell, of the Normal School, Saskatoon, recently outlined a suggested program of studies, which follows:

FIRST YEAR.

1. English—Literature and Oral Reading, Composition, Spelling.

In composition the teacher of English will be responsible for teaching the principles involved: while, throughout the fall high school course, an essay every two weeks will be required. These brief essays are to be related to the subjects of study for the year and to be read by the teacher of the subject concerned. The essays, re-written, if necessary, are to be retained in loose-leaf binding for the year.

The spelling will be related to the various subjects of study, and each teacher will be responsible for the spelling in connection with his own subjects.

2. Mathematics—Unified (or correlated) course to be outlined, e. g.:

Arithmetic and Mensuration, with simple gener-

alisations of arithmetic. Such knowledge of Algebraic principles as will enable the student to solve simple questions of one and two unknowns. (The aim is to give the students the power to apply the equation to the solution of problems.)

3. General Science—Geography: An outline of such definite work in commercial geography as may be considered necessary. Such physical geography as shows a close connection with principles or physics.

Elementary General Science—All with special reference to agriculture and household science.

- 4, 5. Options—Any two of language, art, music, manual training, household science, commercial.

SECOND YEAR.

1. English—Literature and Oral Reading, Composition (essay work only), Grammar (review of the essentials of the sentence.)

2. Mathematics—Unified, course to be outlined.

3. General Science, with special reference to agriculture.

4. History—Canadian and British.

5. Options—Any two of languages, art, music, manual training, household science, commercial; (one-half time to each option.)

THIRD YEAR.

1. English—Literature, Essays.

2. Mathematics—Unified, course to be prescribed.

3. History—General History, the Canadian Constitution.

- 4, 5. Options—Any two of languages, physics, chemistry, biology, music, agriculture, household science, manual training, commercial.

FOURTH YEAR.

Five units to be selected from the following groups—not more than two to be chosen from any one group.

A unit is one hour per day or five hours per week in a subject.

1. English—(a); Literature, (b); Literature, second course.

2. Mathematics—(a) Algebra, Geometry, Trigonometry as far as first year university; (b) advanced work to be determined—solid Geometry and Elementary Analytic Geometry.

3. Science—Physics, Chemistry, Biology.

4. History.

5. Languages—Latin, Greek, French, German.

THE ROYAL MILITARY COLLEGE OF CANADA.

There are few national institutions of more value and interest to the country than the Royal Military College of Canada. Notwithstanding this, its object and the work it is accomplishing are not sufficiently understood by the general public.

The College is a Government Institution, designed primarily for the purpose of giving instruction in all branches of military science to Cadets and Officers of the Canadian Militia. In fact it corresponds to Woolwich and Sandhurst.

The Commandant and military instructors are all officers on the active list of the Imperial army, lent for the purpose, and there is in addition a complete staff of professors for the civil subjects which form such an important part of the College course. Medical attendance is also provided.

Whilst the College is organized on a strictly military basis the cadets receive a practical and scientific training in subjects essential to a sound modern education.

The course includes a thorough grounding in Mathematics, Civil Engineering, Surveying, Physics, Chemistry, French and English.

The strict discipline maintained at the College is one of the most valuable features of the course, and in addition, the constant practice of gymnastics, drills and outdoor exercises of all kinds, ensures health and excellent physical condition.

Commissions in all branches of the Imperial service and Canadian Permanent Force are offered annually.

The diploma of graduation is considered by the authorities conducting the examination for Dominion Land Surveyor to be equivalent to a university degree, and by the Regulations of the Law Society of Ontario, it obtains the same exemptions as a B. A. degree.

The length of the course is three years, in three terms of nine and one-half months each.

The total cost of the course, including board, uniform, instructional material, and all extras, is about \$800.

The annual competitive examination for admission to the College, takes place in May of each year, at the headquarters of the several military districts.

For full particulars regarding this examination

and for any other information, application should be made to the Secretary of the Militia Council, Ottawa, Ont., or to the Commandant, Royal Military College, Kingston, Ont.

PESTALOZZI — FROEBEL SUMMER SCHOOL.

The Pestalozzi — Froebel Summer School, 616, 22 So. Michigan Boulevard, Chicago, will give special attention this summer to the new kindergarten-Primary Movement and to Playground Training. Miss Alma Binzel, first vice-president, International Kindergarten Union and Executive Member, National Primary Council; will give special courses in kindergarten, primary curriculum and in primary methods. The courses in school pageants, folk dancing and playground games, by Mari Ruef Hofer, author of the popular "Folk Game and Playground Books" will be another feature. These play courses meet the special needs of teachers who interested in conducting school festivals and pageants or to do supplementary work in school playgrounds and for those wishing to prepare for summer positions in chautauques or summer camps. The school will be in session from June to August 3.

NOTES ON "THE LAY OF THE LAST MINSTREL."

Lady Dalkeith (afterwards Duchess of Buccleugh) suggested to Scott that he should write a poem on the legend of the goblin page, Gilbert Horner, and it was from this beginning that the poem grew. What is the importance of the goblin page in the events of the story? What different forms does he take? "Who has not heard of Surrey's fame?" Who was this Surrey? And what do you know of his fame?

Make a list of all the superstitions that are named in the poem.

With verse 9, Canto I, compare one of the songs in Tennyson's "Princess." Write a short character sketch of William of Deloraine.

Find other references in poetry to the following: St. Mary's Lake; the Flower of Yarrow; Ettrick Forest; the Bloody Heart; fair Melrose; Cheviot gray (are the Cheviots always "gray" in Scott's description of them?) Collect as many lines as you can of different metres. What others of Scott's characters besides the Monk could say:

Paynim countries have I trod,
And fought beneath the cross of God?

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ARBOR DAY

Copy of Card sent out by Inspectors.

I hereby appoint Friday, May 18, as Arbor Day in the Public Schools. Please observe carefully the provisions of Reg. 20.

The co-operation of parents and all others in the district is invited, and attention should be given not only to the school grounds and premises, but to the roadsides and other public grounds as well.

To insure satisfactory results, good trees should be purchased by the Trustees and properly planted.

The attention of Teachers is also directed to the importance of preparing for the observance of Empire Day, which falls on the last teaching day preceding the 24th of May. (Reg. 20.)

It is most desirable on Empire Day to hold a Public Meeting in the Assembly Hall or School Room, at which, in addition to the programme prepared by the teachers and pupils, there may be addresses of a patriotic nature by ratepayers or visitors.

Tree Planting in School Gardens.

There are two main reasons for planting trees and shrubs on School Grounds, says H. W. Watson in the *Western School Journal*.

(1) Improvement for an educational purpose, as many varieties as possible of a suitable character should be used.

(2) Improvement from an esthetic standpoint; varieties chosen should be arranged to harmonize and produce beauty.

Preparation of Soil—Thoroughly cultivate a strip of ground about six feet wide and to a depth of eight to ten inches to make the soil loose and porous. A crop of potatoes or other hoed crop is an excellent preparation; failing this a good deep summer-fallow does well. Plough deeply in the fall, but not in the spring.

Keep the surface well cultivated for the first two or three years, a hoed crop among the trees serves the purpose well.

Planting—Transplant trees as early in the spring as possible and before they begin to leaf out; evergreens should be moved about the end

of May or early June. Place the trees when young about ten feet apart in the row so that when larger each alternate one may be removed to leave room for the permanent ones; or better still alternate the higher growing trees with native spruce or shrubbery.

Select small trees, deciduous trees about six to eight feet high and evergreens two to three feet high.

Obtain the trees from the same locality, and growing under similar conditions.

In raising a tree for transplanting, cut only the larger roots, retaining the smaller feeding roots, with as much soil as possible adhering to them.

It is well to wrap the roots with a wet sack, and if the trees are to be kept long before planting, the roots should be covered with manure, litter or moist hay to keep out the sun and wind.

Prepare a hole deeper than that from which the tree came and wide enough to allow the roots to be fully spread out.

Place the tree in the centre of the hole and while holding it erect with one hand, spread out the roots with the other hand and place around and over them a liberal supply of the finest top soil with a fair mixture of well rotted manure.

Firm the soil about the roots and if it is fairly dry, pour in about a pailful of water. Fill in the rest of the soil, tramping it at the same time with the heel of the boot; trees must be planted firmly.

Leave the surface as fine as possible and throw a small quantity of mulch about the tree. If the tree is rather branching, trim off some of the top to suit the weakened condition of the root, but only take off the lower, longer branches, leaving the upper, younger and more vigorous shoots.

Wind Breaks.—Cultivate thoroughly a strip of land on the north and west sides of the grounds, not less than twelve feet wide and to a depth of eight to ten inches; this should be done during the summer previous to planting.

Planting the Seedlings.—The seedlings should be planted four feet apart in rows. The rows should be four feet apart. The seedlings in each succeeding row should alternate with those of the preceding row. Constant surface cultivation

is necessary for two years, and a hoed crop serves this purpose best.

Plant all seedlings or trees an inch or two deeper than they originally were growing.

Be careful to prevent the roots being exposed to the sun or wind before planting; it is well to carry them while planting in a pail half-filled with muddy water. The best time to plant is on a dull, cloudy day or in the evening.

Seedlings or cuttings may be planted easily with a spade. Thrust the spade down full depth at an angle of 45 degrees. Straighten the spade and place the cutting in the opening behind it. Jerk out the spade and tramp the loose soil firmly about the cutting. After the seedlings are planted level the soil carefully and make the surface very fine; it is well to scatter fine straw or litter over the surface of the soil to a depth of two inches to preserve the moisture. This is not recommended where frequent cultivation is possible. Cultivation or loosening of the surface soil may follow about a day after a heavy rainfall.

If gaps should occur in the plantation through failure of any trees to grow, these should be filled in as soon as possible.

No pruning is necessary in a wind break and thinning will not be required for fifteen or twenty years.

A nursery may easily be carried on at the school by procuring seeds of Maple, Elm, Ash, Basswood, etc., planting them in rows and afterwards transplanting the seedlings when two or three years old into the permanent locality.

How to Plant Cuttings.—1. Cuttings must never be allowed to dry out.

2. It is advisable to soak them in water for one or two days immediately before planting.

3. The soil for planting must be mellow and contain plenty of moisture.

4. Most failures result from too shallow planting—never allow more than an inch or an inch and a half to project above ground.

5. Cuttings should be planted on a slant.

6. Set the cuttings with buds pointing upwards.

7. The soil must be well firmed and in close contact with the whole of the portion below ground. Very frequently when the hole is made with too large a stick or dibble, the soil, when tamped, closes round the neck of the cutting, but the lower part is left in a kind of pocket. As a consequence the cutting dries out and fails to root.

8. In fairly loose soil a hole may be made with a dibble or suitable stick, but the hole must not be much larger than the diameter of the cutting. Perhaps the best results will follow the use of a spade. The spade is thrust into the ground in a slanting direction, the handle lifted and the cutting put in under the spade, which is then drawn out, allowing the soil to fall back into place. The soil must then be firmly tramped.

9. Never push the cutting into the soil without first making a hole.

Directions for Making Cuttings.—Varieties Easily Propagated by Cuttings—Willows, Russian Poplars, Cottonwood, and Black Poplar or Balm of Gilead. **Time to Take Cuttings**—The wood must be well matured and cuttings may be made at any time in the fall after the leaves have dropped, or in the spring before the spring growth commences. **Cuttings made in the fall** should be tied in bundles of from 10 to 25 cuttings in each one and then buried at once in moist but well-drained soil, where they may remain till ready for planting in the spring. **Cuttings taken in the spring** will probably give the best results, and we would advise making them at that time when stock can be obtained in the vicinity.

Material—The best cuttings are made from well matured shoots of the previous season's growth. Care should be exercised to discard any shoots that may have been injured by frost. **Cuttings are generally made from 8 to 12 inches long from shoots one-quarter to three-quarters of an inch in diameter, though larger and even smaller shoots will root under proper conditions.**

Care must be taken never to allow cuttings to dry out once they are made, before being planted.

Before you Plant a Tree.

There are several things to think of before you plant a tree, and we want you to think of them now before Arbor Day, First—What trees grow best in your neighborhood? Second—What do you need your trees for, a windbreak, shade, beauty, or all three? Third—What are the best trees from the bird viewpoint—can you use those? Fourth—How deep a hole should you dig for your tree? Fifth—How far apart should the trees be planted? Sixth—How should the young trees be protected and preserved?—Ex.

Recitations for Arbor Day.

How the Robin and His Mate Chose a Nest.

I was sitting alone by the maple tree,
I wasn't asleep — you needn't tell me.
Two voices I heard right over my head,
And this is precisely just what they said:

"Oh Robin! Oh, Robin! I'm all out of breath;
Oh Robin! Oh, Robin! I'm tired to death,
With 'Come look at this tree and now look at that,
I'll look no more. Oh, Robin, that's flat."

"Why Robina, Robina, Robina, dear,
You must be both tired and nervous, I fear."
And what do you think?— I'm sure of this,
I plainly heard Robin then give her a kiss.

"Oh, see, love, the fountain there by the path,
What a beautiful place for a nice morning bath,
And dewy and fresh at the breaking of dawn,
Fat worms will be plenty right here on the lawn.

With slugs from the garden, and all of the best
Oh, Robina, here is the place for our nest."
Then gaily they flew to the top of the tree
And that's where they'll build as sure as can be.

—SELECTED.

Arbor Day Exercise.

(Choose five children to stand in line. They raise hands for branches and repeat the first two lines in concert; then each child repeats a stanza alone, and as he closes writes the name of his tree on the blackboard. If these names are written in a vertical column, the initials will spell "Maple." The last stanza is to be repeated in concert.)

If I put my arms up straight,
Quite a pretty tree I make. (In concert).

1. I'm a tree that's very sweet,
I give something good to eat,
And my leaves when they are grown
Have five fingers of their own.
Maybe you have guessed my name,
But I'll write it just the same. (Maple).
2. I am loved of bird and bee,
The little buds you see on me
Next month will be blossoms white
(Such a very pretty sight).
And a treat I have in store,
When the summer days are o'er. (Apple).
2. Tall am I as can be seen,
And my leaves are evergreen;
Nothing have I good to eat,
I can't give you any treat," "
But if needles you would buy,
Come to me. I can supply. (Pine).
4. I am called Apollo's tree,
People once made wreaths of me;
And they gave them to the men

Who did deeds to merit them.
Many are the stories told
Of these heroes brave and bold.

(Laurel).

5. People say when they see me,
"What a very graceful tree."
So the little fairy elves
Wanting some tree for themselves
Made one like me, I am told,
Giving it a crown of gold.

(Elm.)

MAPLE who'll tell
What they altogether spell?
That's the tree we beg to say,
Many plant this Arbor Day.

—M. HELEN BECKWITH in SCHOOL EDUCATION.

What do we Plant?

What do we plant when we plant the tree?
We plant the ship that will cross the sea,
We plant the masts to carry the sails,
We plant the plank to withstand the gales,
The keel, the keelson and beam and knee,
We plant the *ship* when we plant the tree.
What do we plant when we plant the tree?
We plant the houses for you and me,
We plant the rafters, the shingles, the floor,
We plant the studding, the laths, the door,
The beams and sidings, all parts that be,
We plant the house when we plant the tree.
What do we plant when we plant the tree?
A thousand things that we daily see,
We plant the spire that out-towers the crag,
We plant the staff for our country's flag,
We plant the shade, from the hot sun free,
We plant all *these* when we plant the tree.

—HENRY ABBEY.

Suggestions for Arbor Day Lessons.

Song—"The Maple Leaf," and "The Brave Old Oak."

Reading—Let each pupil obtain a suitable selection from the school library or from his own books.

History—The Druid's Oaks. Tree Dwellers (Dopp). The New Forest.

Geography—In what countries do the following trees grow: Banyan, eucalyptus, bread-fruit, banana, pine, persimmon, walnut, pepper, peach, maple and box. Have a short talk about climatic and soil conditions in these countries.

Composition—"The Life Story of a Maple Tree," "Story of Useful Trees," "Story of Food-giving Trees."

Spelling—Tree names.

Agriculture—Planting seeds.

EMPIRE DAY

The observance of Empire Day, the school day next before the 24th of May, originated in a recommendation of the Dominion Educational Association, at its meeting in Halifax in 1898.

The Council of Public Instruction of Nova Scotia was first to adopt the suggestion, setting apart the day named for special exercises in the schoolroom, not for the purpose of developing a spirit of boastfulness in the greatness of the British Empire, but for the study of the causes of that greatness, of the history of the rise, growth and alliance of its different peoples, and of the development of that spirit of unity which binds together all the nations within the Empire as loyal, free and willing partners in the great confederation of kingdoms and provinces over which King George reigns.

Outside of the schoolroom, and beyond the limits of the Dominion, the idea is spreading. The 24th of May, which we in Canada know as Victoria Day, is beginning to carry the sentiment, if not the name, of Empire Day to other Britons beyond the sea. The mother country realizes more than ever before that in the loyal co-operation of her colonies, and in her loyal co-operation with the colonies, lies her true strength.

The motives of the United Empire Loyalists were too grand to perish in defeat. Their sacrifices have borne fruit in Canada; and, through Canadian influence and example, their love of British freedom in self-government and British devotion to the crown now spreads to other British lands, to warm the hearts and guide the movements of free and loyal Britons in a wider empire than that of which they dreamed and for which they fought in vain.

To bind us closer to our sister colonies, as well as to the motherland, and to increase our mutual helpfulness and love for them, is and should be the chief aim of Empire Day.

The History of Empire Day.

Where in the King's Dominions was Empire Day first celebrated? It was first celebrated in Canada. Mrs. Fessenden of Hamilton, Ontario, did much to bring it about, so did Hon. Geo. W.

Ross, late Minister of Education in Ontario, now Senator Ross; and to the influence of Lord Meath more is due than to any other single person in making it a real Empire Day throughout the King's Dominions.

Pamphlets and newspaper articles have been written to prove that Mrs. Fessenden or Mr. Ross originated the idea. But it cannot be said that Empire Day originated with them, although they did much to put the idea into practical shape. The simple and fairest way would be to regard it as the product of the experience and planning of many people working along similar lines. This opinion should have weight with those who would ascribe to one person the merit of originating the idea.

In the EDUCATIONAL REVIEW for June, 1890, there appeared a model lesson for the schools on the "Union Jack," from the pen of one of its editors, at that time, Dr. A. H. MacKay. This lesson, was expressly intended to aid instruction on the flag and the Empire, on flag days, the 24th of May and July 1st being mentioned. It is re-produced in this issue, just as it appeared in 1890, to show that it has the germ of Empire Day in it.

The REVIEW does not claim to have originated Empire Day, but it modestly puts forth the claim to have been one of the forces working in that direction. The merit of "discovering" Empire Day, as we have before said, belongs to no individual. It should be regarded as anonymous, or as being evolved from the thought and experience of many individuals, working in many ways and through many years.

The Union Jack.

(From the EDUCATIONAL REVIEW, June, 1890.)

TEACHER. When we hoist our flag on the 24th of May, or on the 1st of July, what do we really pay our respects to when we honor the flag? Is it the cloth or the design?

S. No. Of course not. There may be better cloth and more beautiful designs which we never treat with similar respect.

T. Your argument is good. What do we really pay our respects to, then?

S. To what the flag represents.

T. What does the flag represent? The Queen, is it?

S. No, the flag was before the queen was.

T. The government then? There was no flag before there was some kind of government.

S. I think it represents more than the government, although I can't say exactly what it is. We never think about the government when we cheer for the flag.

T. What do you think about, then, when you cheer for the flag?

S. Of the great things done by people who carried it as we do.

T. Very good. You have a very clear idea. The flag represents the people and what they did. Now what have the people done?

S. They won great victories over other peoples.

ANOTHER S. When they conquered other people they left them better off than they found them.

ANOTHER S. They made good laws.

ANOTHER S. They tried to become good and noble, to put down what was wrong and to help others to be good and noble.

T. Yes. A great many of them have been distinguished in that way; what more?

JACK. The people have also made their own government, so that the flag represents the government, the people, and what the people have done.

T. Capital, Jack. Your idea is quite comprehensive. What is our flag called?

S. The British Ensign.

ANOTHER S. The Union Jack.

ANOTHER S. The Meteor flag of England.

JACK. The flag that braved a thousand years the battle and the breeze.

T. Well, you are right and wrong. We shall see how. While England's flag has braved the battle and the breeze for a thousand years, the *Union Jack* figured above has been in existence only eighty-nine years to date.

S. How is that?

T. The Union Jack is not England's flag any more than it is that of Scotland or Ireland. The English patron Saint was St. George; and St. George's cross was a red vertical and horizontally armed cross on a white banner. St. Andrew's cross was a white diagonally armed cross on a

blue banner; St. Andrew was the patron Saint of Scotland. The patron Saint of Ireland was St. Patrick, whose cross is a diagonally armed red one on a white banner. And the English, Scotch and Irish, were once separate kingdoms, with their own banners. Here they are:

In heraldry vertical shading lines represent red, horizontal shading lines blue, and the absence of any marking white.

T. When were England and Scotland united?

S. In 1603.

T. Well, it is then the first Union Jack came into existence. It was a Union of the banners of St. George and St. Andrew.

S. What was it like?

T. A blue banner with the St. Andrew's cross covered with the red cross of St. George. When was Ireland united to England and Scotland.

S. In 1801.

T. Well, on that occasion the red cross of St. Patrick was added to the Union Jack; and so that it would not cover out of sight the white cross of Scotland, the Scottish and Irish arms of the cross are matched alternately against each other.

S. Then the Union Jack is called the *Union* because it is a union of the English, Scottish and Irish crosses, and this represents the united three kingdoms.

JACK. And the *Jack*, because it was the English Jack, the sailor, who won for it the most glory at first.

T. Very good.

S. It is not the English flag then?

T. No more than it is the Scottish or Irish flag. The English cross is in front; but the whole blue field, as well as the white cross is Scottish. It is the Scottish banner plus the cross of St. George and St. Patrick. It is now the British flag — the flag of the world-wide Empire.

S. What is the British Ensign?

T. It is a red flag with the *Union* in the upper corner next the flag staff. The part most distant from the staff is called the fly. This flag is also known as the British Merchant Flag. The Naval Reserve Flag has a blue fly. The Man-of-War flag has a white fly divided by a St. George's cross, the upper inner angle of which is filled with the Union. The flag of the Admiral of the Fleet is simply the Union; of the Lord Lieutenant of Ireland, a union with a harp in the centre. There

are many modifications of the flags to indicate particular kinds of service; but we are concerned only with the Union Jack and the Ensign.

S. Isn't there a modification of the Ensign which indicates the Dominion of Canada?

T. So there is. And as it is so near Dominion Day, I must let you know it. The Dominion Flag is simply the British Ensign with the Canadian Coat of Arms on the fly.

S. And what is the Canadian Coat of Arms?

T. Here it is, on the shield between the supporters, the Lion and the Unicorn.

Canada is made up of its provinces; and its Coat of Arms consists of these provinces "quartered," as the heraldic term is, on the one shield.

S. The Canadian Flag, then, represents the Empire generally and each Province in particular. Which of them are the Arms of Nova Scotia?

T. The fish with two thistles above and one below in the centre of the shield.

New Brunswick's is on the left. What is it?

S. A ship with a lion above it.

T. Prince Edward Island's at the bottom on the right?

S. The little tree under the great one.

T. British Columbia's to the left?

S. The wreath and crown.

T. Manitoba's to the right of Nova Scotia?

S. The buffalo and red cross.

T. Quebec's, the upper right corner?

S. The three maple leaves, lion and two fleur-de-lis.

T. Ontario's on the left side?

S. The three maple leaves and red cross.

T. What is the tendency of civilization — to break up countries into small independent states, or to unite small states into larger ones?

S. Union is the tendency.

T. What advantage is there, generally speaking, in union under one government?

S. All matters in the united countries will be settled by law; while if they were separate they might be settled by war.

T. Which is the most widely spread empire in the world?

S. The British Empire.

T. Is it united into one?

S. Yes, but not so closely as smaller states.

T. Would it be any advantage if all the world were united in one great state?

S. I think it would. They would settle

matters then by their laws, and there would be, perhaps, no possibility of war; and there might be fairer trade.

T. Perhaps. What orders of governments subordinate to each other are covered by our flag, beginning with the smallest.

S. The School Section Corporation, then the Dominion, then the Imperial Government.

T. What might come next?

S. Perhaps Tennyson's federation of the world and parliament of man.

T. Well, the Union Jack has evidently the lead in this great work of union. Hurrah for the Union Jack.

A Living Union Jack.

We give the following letter from the Head Master of the St. Mark's Boys' School, Nottingham, England, in the hope that the information may be of use to our readers.

The ground was marked out (a rectangle 32 ft. by 16 ft.) with 26 small circles on the front line, and at the end of each line right and left. There were 11 rows with 26 children in each row. The children in all rows were numbered similarly and the rows distinguished by letters. I prepared a large coloured plan (given above on a reduced scale) on which each child's position was indicated. Every child was given a card on which were marked his or her *row* and *number* in that row; also a red, a blue and a white piece of material about the size of a handkerchief. When the various "Flags" were called for, the children held up the coloured pieces of material according to their position on the plan. Every card gave full instructions as to the right colour for each flag, *i. e.*—

Row F. No. in Row .6	Row J. No. in Row 6.
St. George's Flag . . . R	St. George's Flag . . W
St. Andrew's Flag . . B	St. Andrew's Flag . W
St. Patrick's Flag . . W	St. Patrick's Flag . . W
Union Jack R	Union Jack W

The pieces were held by the longer edge, between the tips of the fingers and palm of the hand, the loose end thrown over the back of the hand and wrist. This appeared to give the greater display of surface; the hand being held so that the lower edge of the piece lay on the child's forehead. At the display of the Union Jack the children on

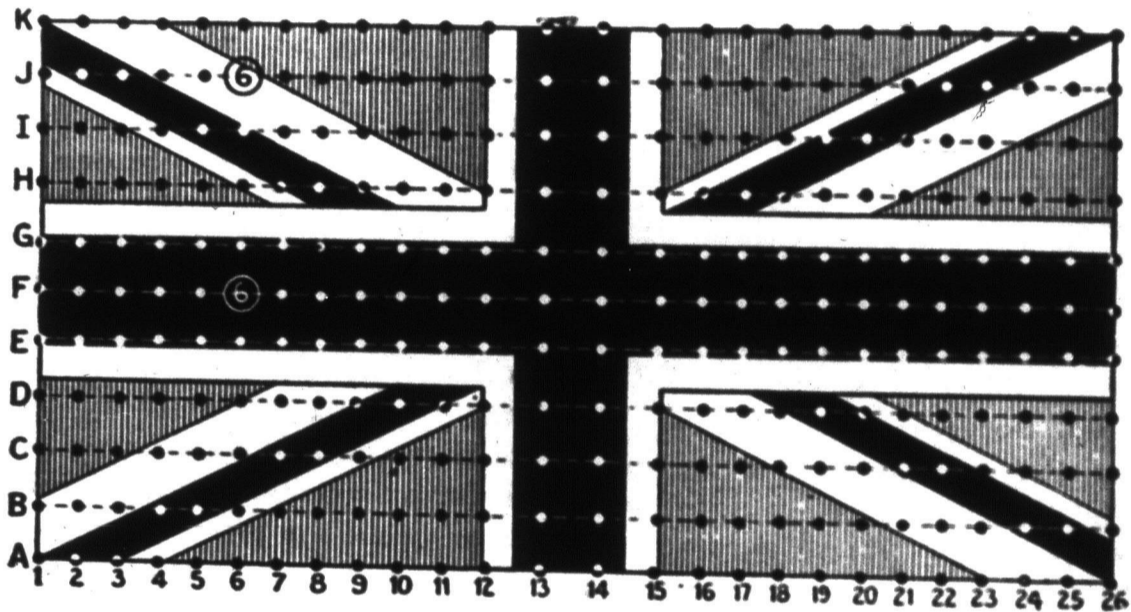
the fringe of St. George's Cross held up white to show the border of that Cross.

While the "Flags" were being displayed, an appropriate chorus was sung.

The Union Jack.

May be used as a recitation given by a boy wearing the national colors, and carrying a flag, the whole school to join in the chorus.

It is only a small bit of bunting
It is only an old colored rag,
Yet thousands have died for its honor,
And shed their best blood for the flag.
We raise it to show our devotion
To our King, to our country and laws;
As the outward and visible emblem
Of advancement and liberty's cause.



You may call it a small bit of bunting,
You may say it's an old colored rag;
But freedom has made it majestic,
And time has ennobled the flag.

It is charged with the cross of St. Andrew,
Which, of old, Scotland's heroes has led;
It carries the cross of St. Patrick,
For which Ireland's bravest have bled;
Joined with these is our own English ensign,
St. George's red cross in white field,
Around which, from King Richard to Wolseley,
Britons conquer or die, but ne'er yield.

You may call it a small bit of bunting.
You may say it's an old colored rag;
But freedom has made it majestic,
And time has ennobled the flag.

It flutters triumphant o'er ocean,
As free as the wind and the wave,
And the bondsman, from shackles unloosened,
'Neath its shadow no longer's a slave.
It floats over Malta and Cyprus,
Over Canada, India, Hong Kong;
And Britons, where'er their flag's flying,
Claim the rights that to Britons belong.

You may call it a small bit of bunting,
You may say it's an old colored rag;
But freedom has made it majestic,
And time has ennobled the flag.

The Colours of the Flag.

What is the blue on our flag, boys?
The waves of the boundless sea,
Where our vessels ride in their tameless pride
And the feet of the winds are free;
From the sun and smiles of the coral isles
To the ice of the South and North,
With dauntless tread through tempests dread
The guardian ships go forth.

What is the white on our flag, boys?
The honor of our land,
Which burns in our sight like a beacon light
And stands while the hills shall stand;

Yea, dearer than fame is our land's great name,
And we fight, wherever we be,
For the mothers and wives that pray for the lives
Of the brave hearts over the sea.

What is the red on our flag, boys?
The blood of our heroes slain
On the burning sands in the wild waste lands
And the froth of the purple main.
And it cries to God from the crimsoned sod
And the crest of the waves outrolled
That He send us men to fight again
As our fathers fought of old.

We'll stand by the dear old flag, boys,
Whatever be said or done,
Though the shots come fast, as we face the blast,
And the foe be ten to one;—
Though our only reward be the thrust of a sword
And a bullet in heart or brain,
What matters one gone; if the flag float on
And Britain be lord of the main.

—By FREDERICK GEORGE SCOTT, from "Poems Old and New," published by WILLIAM BRIGGS, Toronto.

May in Canadian History.

In May, 1407, John Cabot sailed from Bristol on the famous voyage of discovery which first brought the English flag to the shores of the New World. (In the same month, Americans sailed from Cadiz, reaching what is now known to have been the coast of the Gulf of Mexico a few days later than Cabot's discovery of some portion of our coast.)

In May, 1534, Cartier first saw the coast of Newfoundland; and in May of the following year he set sail from St. Malo on his second voyage, which was to result in the discovery of the gulf to which he gave the name of St. Lawrence and the river now also called by that name. After wintering in Canada, he started on his return voyage on the 16th of May, 1536; and he left St. Malo on his last voyage to Canada on the 23rd of May, 1541.

Champlain discovered the Ottawa river in May, 1613.

On the 18th of May, 1642, Maisonneuve founded Ville Marie, afterwards to become the commercial metropolis of Canada, the city of Montreal.

The Hudson's Bay Company was incorporated by royal charter in May, 1670.

In May, 1690, Sir William Phipps captured Port Royal.

The 18th of May is celebrated in St. John, N. B., as "Loyalist's Day," because the United Empire Loyalists from the first fleet of transports landed at St. John at about that date in 1783; and May 18, 1785, is the date of the charter of the City of St. John, the oldest incorporated town in Canada.

In May, 1813, United States troops were defeated by the British and Canadian forces at Sackett's Harbor, and at Fort Meigs, near the site of the present city of Toledo; and in May of the next year Oswego was taken by the British.

May 25th, 1870, the Fenians crossed the frontier at Trout River, Quebec, but were driven back by Canadian volunteers.

The work of construction of the Canadian Pacific railway was begun in May, 1881.

The first meeting of the Royal Society of Canada was held in Ottawa on May 25th, 1882.

The battle of Batoche and the surrender of Poundmaker a few days later, virtually putting an end to the Northwest Rebellion, took place in May, 1885.

In May, 1901, the Canadian House of Commons passed a bill to establish the 24th of May as a holiday in Canada, under the name of Victoria Day.

HELPFUL HINTS FOR RURAL TEACHERS.*(Continued from April issue.)***NUMBER FOR THE SECOND GRADE.**

Class at the blackboard. Place points one foot apart. Let the teacher test the distances and pupils make corrections. If necessary have the entire class place points again.

Next, draw a line connecting the points. "What have you now?" "I have a horizontal line one foot long"—or a vertical line as the case may be. Divide the foot into two equal parts. How many inches in each part? Divide into fourths. How many inches in one-fourth of a foot? What is two-fourths called?

Draw a line one foot long. Divide it into three equal parts. What is one part called? How many inches in one-third of a foot? In two-thirds? In three-fourths?

HISTORY AND ORDER.

On entering the school of which I have had charge the past term I had considerable trouble in keeping my room orderly. I adopted the following silent plan: I first explained the great need of orderliness in battles, then I concluded by stating that to the side of the room showing itself most orderly I would give the name of a victorious general or vessel, but the side opposite should have the name of the one defeated. These names were written at the top of the board in colored crayon on corresponding sides of the room. When both sides were orderly names were given where the battle was a draw, thus leaving no room for remonstrance.

I found this plan a very valuable one, for it stimulated the study of history and current events in very young pupils.

After time had been given for sufficient research, these names furnished material for little talks or discussions. Dates and anything else of importance attached to the names were brought out.

PICTURES IN THE SCHOOLROOM.

Good portraits of King George, Kitchener, Longfellow, etc., should, if possible, be on the schoolroom walls. If these cannot be obtained, take the large pictures that frequently appear in illustrated papers and paste to manila paper. They should be changed frequently.

The large pictures in illustrated papers of scenes in different countries can be pasted on manila paper, and will be of great service in the schoolroom. Ask the pupil's help in collecting pictures.

THE CHILDREN'S HOUR

DEAR BOYS AND GIRLS:

Although the last contest was fairly difficult and you were also asked to include the name of a new subscriber with your entry, I am pleased to say that the competition was a great success. The large number of entries received made the matter of judging a more or less difficult task and after giving each one careful consideration the work of Mary E. Bonnell, Mark Street School, St. Stephen, N. B., has resulted in her being awarded the splendid camera, which I trust will encourage not only the prize winner, but all you children, who read this page, to strive your very hardest in future contests.

The subject of the competition this month is as follows:

Make the most number of words out of the letters contained in the word "Educational." No letter must be based more than the number of times it appears in the given word "Educational" for instance you can make the word "date," but not "dates." This contest is open to all children between the ages of six and fifteen, and the only rule is that the number of words must be written at the end of the work, together with the name, address, and the age of the sender, and also the teacher's name. Entries to reach this office not later than May 31. The splendid prize of a watch will be awarded the boy or girl who sends in the longest list of neatly written and correct words. All communication to be addressed:

THE EDITOR, "Children's Hour,"
EDUCATIONAL REVIEW,
St. John, N. B.

THE DISASTROUS SLED RUN.

BY THE EDITOR.

"Well, Bobbie," asked Jean Brown, as they finished their breakfast, one morning recently, "what are we going to do today?"

"As it is such lovely weather, and the snow is still on the ground, I think it will be great to have a run on the sled," was the reply.

So getting their warm things on, and kissing their mother good-by, they ran out of the house,

stopping only for a few moments to stroke "Topsy" the little kitten which their friend the Boy Scout had rescued a few days before, and which was now perfectly happy in her new surroundings.

"Be careful, children, not to let the sled get away too fast on Lansdowne Hill, as there is a nasty low wall at the foot, and you may not be able to stop yourselves in time," cautioned Mrs. Brown, as she followed them to the door.

With an "All right mamma, we'll take care," both children sped away dragging their sleds after them.

"Now then, Bobby, let her go," said Jean, sometime later, as they seated themselves on the sled at the top of Lansdowne Hill, at the same time taking good care that feet were clear of the ground.

Away they went, the brilliant sunlight dazzling their eyes, as it was reflected from the pure white snow, the cool wind fanning their faces, and also causing Jean's hair to float away out behind her, in waves, showing to full advantage its splendid length.

Snow laden trees and bushes were passed in a flash, as the speed increased, and the bottom of the hill drew nearer. Both children were too excited to remember the caution of their mother, until within a short distance from the wall, when a shout from Jean caused Bobbie to jam on the brakes, and dig his heels hard into the frozen snow, but too late to prevent a collision, and with a "crash" the sled struck the wall a glancing blow, as Bobbie had managed to turn to the left a little.

For a few seconds all bystanders might have been able to see were arms, legs, flying snow and pieces of wood.

Then presently Jean crawled from the wreckage none the worse, but her brother lay still.

"What's the matter, Bobbie, are you hurt?" she asked, as frightened and shaking she bent over the form of her brother.

At first there was no reply, but presently Bobbie turned over on his back, giving a stifled cry of pain as he did so, opened his eyes, and saw the anxious look on his sister's face.

"I'll be all right, but I am afraid I have hurt

my shoulder a bit," he said as he bravely tried not to show the pain he was enduring.

"Let me put your arm in a sling, so as to prevent it moving much," Jean replied, as she hastily removed her scarf, and put to test the little bit of first aid which she had learned, at a class held by the doctor in the small town in which they resided.

After brother's shoulder had been strapped into position, and she had examined the remains of their sled, only to find that it was broken too much to bother about, they set off for home again, and arrived some time later, with Bobbie not very much the worse for the tramp, although his shoulder pained a great deal. He never murmured the least bit, however.

"Now, children," said Mrs. Brown, after her son had been put to bed, the doctor who had been called, had given the required attention, and Bobbie was resting comfortable, whilst Jean was standing at the side of his bed, "I trust this will be another lesson not to disobey instructions, and warnings." That is all I am going to say as to the matter, as I think you have both had a big enough lesson to remember for a long while to come."

She then left the room, as both children remained silent, feeling particularly guilty, but each resolving in their own mind that it certainly would be the last time, as they would take great care such lessons would not have to be learned again.

At last they began to talk to each other, and make plans as to what they would do when Bobbie was up again, and quite well, but we will have to leave them in their discussion, until next month, when perhaps we may be in time to hear as to how their purposed scheme worked out.

A study in "self-appraisal" was made by a large Brooklyn school with thirty-nine teachers. The principal, Alexander Fichandler, upon receiving the teachers' ratings found that six teachers rated themselves too high, six rated themselves too low, according to the principal's judgment. Only three teachers over-estimated their skill in their instruction. Dr. Fichandler concludes: "Unless the teacher acknowledges the justice of his ratings, they become merely sources of irritation and unhappiness, and consequently a cause of diminished efficiency."

THE QUESTION BOX.

The Editor is always pleased to give whatever assistance possible, with regard to problems, questions, etc., but owing to space and the large number of letters received, it is essential that not more than two problems, etc., be submitted in the letter. Address all enquiries to "Question Box" for this column.

V. F.— Probably a sparrow. Description slightly vague. Have children report shape of bill, and if it lights on ground.

E. M.— First class teachers. For further information write to Educational Office, Fredericton.

M. E. L.— Albania is one of the oldest settled states on the Balkan peninsula. Two of the ports on the Adriatic date back to the days of the Romans, and the people have clung tenaciously to their traditions. During the fourth and fifth centuries the country was in the hands of the Goths. In the time of Justinian it again became Roman, but in the seventh century the Serbians took it, and held it until the fourteenth, although the Normans, under Robert Guiscard and Michael Comnenus, both tried during that period to form independent states. The Turks have practically held it since that time, but it took the Albanians more than four centuries to realize that fact. During the Balkan war they fought impartially on either side. They have taken no important part in the present conflict, although at one time Austria occupied the north of their country and Italy the south.

M. A.— Edmund Clarence Steadman, American poet and critic, born 1833, died 1908; wrote chiefly lyrics, and compiled several valuable anthologies.

Paul Hamilton Hayne was a native of South Carolina. He was born in 1830, and died in 1886. He was a follower of Keats.

Agnes Machar is a comparatively unknown Canadian writer. We are unable to obtain any information about her.

The Red Wing is a member of the Thrush family. Ceres, Sé-rez. Proserpina-Pro-ser-pi-ná.

S. C. C.— Ex. 34, No. 9., Academic Arith:
 $\frac{1}{10\frac{1}{2}}$ or $\frac{2}{21}$ of sum = wages of both for 1 day.
 $\frac{1}{18\frac{3}{8}}$ or $\frac{8}{147}$ of sum = wages of one for 1 day;
 $(\frac{2}{21} - \frac{8}{147})$ or $\frac{2}{21}$ of sum = wages of other for 1 day;
 \therefore whole sum = wages of other for $24\frac{1}{2}$ days.

Ex. 33, No. 4:
 In 12 days A does $\frac{1}{3}$ of work;
 In 5 days B does $\frac{1}{5}$ of work;
 In 4 days C finishes the work, that is $\frac{2}{3}$ of it;
 $\frac{2}{3}$ of work done by C in 4 days;
 All of the work could be done by C in $\frac{4 \times 3}{2} = 18$ days.

E. R. F.—Ex. 37, No. 2:

Present worth of \$5,000, due 2 years hence, reckoning compound interest at 10% per annum
 $= \frac{\$5000 \times 100}{121} = \$4,132.23$. Difference = \$132.23.

A Subscriber.—Ex. 52, No. 2:

With one in the wagon the rate is ten cents a mile; with two five cents each; with three, three and a third cents. The man drove 8 miles alone; 12 miles with the miller, and 10 miles with the miller and postmaster.

He paid $(8 \times 10) + (12 \times 5) + (10 \times 3\frac{1}{3}) = \$1.73\frac{1}{3}$.

"The Life and History of House Fly" is too long to publish in these columns. If you still require same we will gladly send you a copy on request.

Abstract nouns have neither number or gender. They are always in the third person, except when in the vocative case.

The seeds are not really removed, but by a process of grafting are all contained in a small sac in one end of the fruit.

CLIPPINGS FROM THE PRESS.

Not taken Seriously.

"I believe one of the reasons you find it difficult to get better salaries is because the public does not take the teaching profession seriously. When we get our secondary educational system to the stage where the people realize that it is going to assist them materially in increasing the producing power of the individual and their earning capacity; if we can get the people to believe that a secondary education is just as essential to a young man or young woman's future as the elementary education is, you will have reached the stage where you occupy the position in industrial and commercial life which your profession should occupy. If you get to the stage where they feel that the schools are the best paying institutions there are, then they are going to necessarily realize that the teachers are the ones that are making the institutions what they are and the money they pay the teacher is money well spent."—Hon J. R. Boyle.

Studying Birds.

Quiet colored clothing, a quiet manner, a good bird guide and a pair of field glasses are secondary essentials in studying birds. The first essential is "a seeing eye," and it is surprising how much more we can see if the habit of observation is cultivated." She related that from the window of her classroom her class had identified fifteen species of birds last spring in a Norway maple tree growing in the school grounds. "Look for the birds in that tree early in May, when it is in bloom," she said.

Perhaps They Use Slang.

Mr. William Prendergast, of the Toronto Normal School president of the supervising and training section, stated that the average pupil was careless in his speech and writing,

and was content with indefinite, inadequate and sometimes inaccurate expressions. He was under no social pressure to improve his language. The great war to-day was in part a struggle between culture and material efficiency. The speaker advocated greater attention to composition in the Normal schools, so that children from early years receive through their teachers a high appreciation of English and a desire to speak it in its purest form.

Better Teachers.

The employment of teachers with higher certificates is another striking proof of educational progress, says the minister of education for Ontario in his 1916 report. In 1915 there were 11,850 teachers in the elementary schools, exclusive of kindergarten and night-school teachers. More than eight thousand of these have received Normal School training, and more than one thousand hold first-class certificates. The supply of teachers shows no signs of falling below the number required annually. There were under training in January, 1917, in the seven Normal Schools of the Province, 1,248 students, of whom 1,113 were women and 135 were men. The 160 high schools and collegiate institutes had an enrolled attendance of 38,426 pupils in 1915, or 1,960 more than in the preceding year. The expenditure amounted to \$2,470,974. The enrolled attendance at the Continuation Schools increased from 6,069 to 6,800. Nearly half the pupils are sons and daughters of farmers.

Plans for the Home Garden.

The following plans are recommended for fostering home gardens:

1. Teacher should work as largely as possible through parent, to get opportunity for the child, and get him to commence work. Teacher should act as counsellor, friend, adviser or inspector, visiting the home garden as often as possible.
2. Pupils who agree to do home garden work may be given some of the seed, etc., used in the school garden; reports on what is attempted and accomplished—should be handed in and comparisons made between the home and school work.
3. The teacher's influence should be brought to bear directly to get pupils to agree to plan and plant a home garden.
4. Clubs and other agencies promoting competitive work should be encouraged. Have judges go around to judge the crop. Prizes may be given.
5. A project may be chosen and assigned to be carried out at home, e. g., which kind of beet, or which root vegetable withstands frost best; or, on seed selection. Certain lessons in school may be based on this home work.

I look forward to the coming of the REVIEW and send best wishes for the success of same.—
 B. E. H. New Brunswick.

The REVIEW is getting better every issue, and I gladly enclose \$1.00 for renewal of my subscription—
 —J. G., Halifax.

A KINDERGARTEN TRAINING FOR EVERY CHILD.

BY MISS BESSIE LOCKE.

Extracts from Remarks Before Department of Superintendence, National Education Association, March 2, 1917.

There are 4,000,000 children in the United States between four and six years of age for whom kindergartens have not yet been provided. These 4,000,000 children are each losing two years of possible schooling, making 8,000,000 years lost at this most impressionable and imitative age, when habits for life are being formed. This lost time can never be regained.

In addition to this lost opportunity for the systematic training of the head, heart, and hands, at this formative period of life, there is another phase of the question that is worthy of careful consideration. I refer to the enormous waste of time and money caused by repeating in the primary grades.

The first kindergartens in the States were conducted for the children of the well-to-do. The remarkable value of this training for the children of the poor was soon recognized and mission kindergartens became numerous. Then the more progressive cities and towns tried them experimentally in their public schools. That their worth has been abundantly demonstrated is clearly shown by the spread of the kindergarten and the general introduction of kindergarten training departments into state normal schools and city training schools.

At present 1,228 cities have an aggregate of 8,463 kindergartens in their public schools, with an enrollment of 434,000 children.

It is now generally conceded that no child should begin his primary work without first having the objective and active instruction offered in the kindergarten — that its nature study, stories and handwork should precede all formal reading, spelling, writing and arithmetic.

But besides its acknowledged educational value from the purely intellectual standpoint, the kindergarten has an element of perhaps greater importance for our children. I refer to the moral and ethical training which is such a conspicuous part of this Froebelian philosophy. When we consider

that many of our children are born of untrained foreign parents, some are the offspring of criminals, and a large percentage belong to families having no church affiliation, it is evident that this aspect of the subject cannot be too strongly emphasized.

In a kindergarten in Brooklyn, a little black-eyed child of four, used to steal everything within reach and secrete her spoils in her shoes which were several sizes too large for her. The kindergartners cultivated habits of honesty and frankness in little Rosie, and when she left their care two years later her deceitful ways had all been overcome. Had she not received this careful training it is easy to imagine what her conduct in after life would have been.

If time permitted I could cite many other cases showing how the kindergarten cultivates initiative, self-respect, truthfulness and integrity as a result of which the vices die a natural death, but they are all summed up in the remark of the poor mother who looked reflectively at the class to which her boy belonged, and remarked to the kindergartner in tones of admiration, "It does beat all how you tame them."

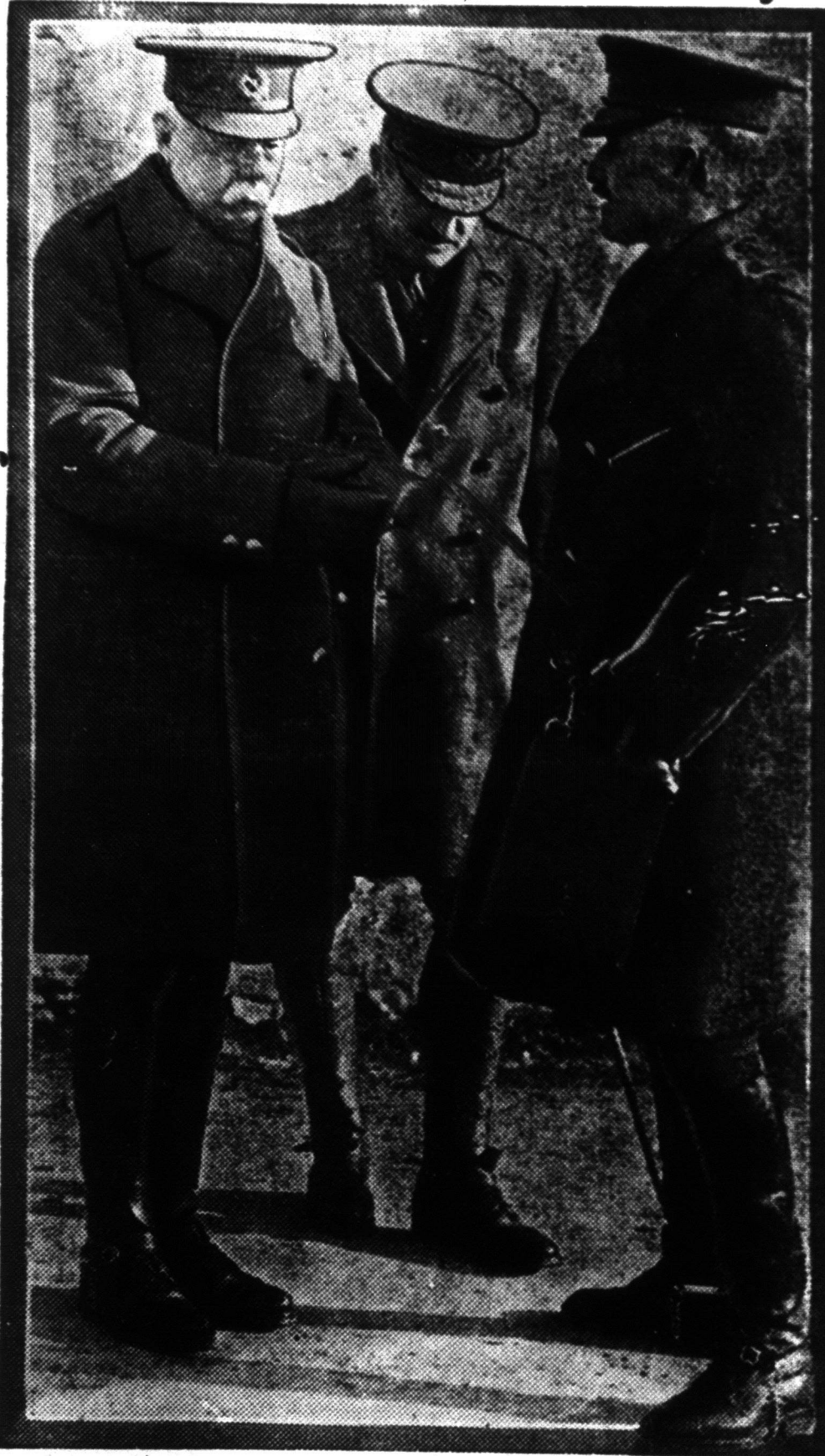
One day while visiting a kindergarten I saw some children modelling in clay and noticed that one of the largest boys in the class was much more awkward in the use of his hands than the others. On asking the reason I learned that he had been there only two weeks. It was a striking demonstration of the value of handwork at this formative period in the development of the child.

Any community would indignantly resent a suggestion to economize by omitting to provide classes for the children from six to eight or from eight to ten years old, and when the full importance of the kindergarten is more generally understood and appreciated, a school system which fails to furnish this educational privilege for all of its children will be considered very negligent of its duty.

At present only one child in nine is receiving this training. It is clearly unfair to provide for only a small portion of our children an opportunity which every child is entitled to receive.

Many communities believe they cannot yet afford kindergartens, and they build high schools and introduce manual training and other special branches for the older children, while the little ones are losing these two years of systematic training.

❧ CURRENT EVENTS ❧



COMMANDS CANADIANS

General Plumer, shown in this picture, is commander of the army of which the Canadian Corps is the main stay. This official photograph was taken on the front in France just before the opening of the Lens-Arras drive.

Three are army commanders, left to right: General Sir Herbert Plumer, K.C.M.G., K.C.B.; General Sir E. H. H. Allenby, K.C.B.; General H. S. Horne, K.C.B.

The War.

The drive commenced last month, continues with unabating fury on the western battle front, both British and French, not only retaking much of the enemy ridden land of France, and "biting" at several places in the Hindenburg line, but frustrating all attempts of the Germans, to drive them out of the ground won. Counter-attacks in massed formation, gas shells, and cunningly placed machine gun have failed to dislodge the conquering allied forces.

The Huns are not vacating the ground without using every means in their power, together with much display of bravery, to repel their foe, many of the ruined villages being veritable miniature fortresses, defended by men who, armed with machine guns, sell their lives at the highest cost.

Although the casualties of the enemy have been two or three times more than the Allies, those of the latter have nevertheless been most severe, although no more than expected by those who were in position to forecast results.

It is difficult to single out any arm of the British forces, for special mention, as each have combined to make the great offensive a success. The Canadian boys have not only held Vimy Ridge, but gone ahead for several miles and consolated all gains, whilst the work of the Canadian gunners, together with that of their comrades on either side has been of the heaviest, searching out as they have been, every nook and corner of the enemy's defense, forming a forward moving barrage, behind which the infantry have moved to at last spring into the demolished trenches and finish the work with bomb and bayonet.

All this has been made of more value and driving power, by the chivalrous dash of the men belonging to the air service. Back and forward they have flown, directing the fire of the guns, marking out new concentrations of troops, and proving victorious in hundreds of air battles.

Space prevents a detailed list of the towns and villages captured, but it may suffice to say that the gains have been made between Lille and Laon.

On the other firing lines little of outstanding importance has occurred, except that Germany has been forced, by the

operations on the Western Front to transfer a large number of troops from the Russian lines to the latter trenches.

From all reports conditions in the countries of the central powers have grown serious, strikes in Magdeburg, Berlin, and other centres causing the authorities to call out the troops, who, using their fire-arms, killed and injured many of the civilians.

Submarine activities have increased, and during the past month the allied and neutral countries have suffered heavily at the hands of such, a British transport "Ardadian" being included in the losses; 287 men were lost. Plans are at present receiving the prolonged and careful consideration at a special war conference, called in Washington, at which are present, British Foreign Minister Balfour, and a party of Statesmen and officers from the Allied countries. It is presumed that General Joffre, is also with the commission.

At a meeting of the commission, held on May 4, President Wilson, occupied a seat in the Executive Gallery, of the House. This is the first time, as far as capitol historians can find, that any president of the United States has appeared in the galleries.

Following the Revolution in Russia, conditions have caused much anxiety owing to difficulties arising between the Executive Committee of the Council of Workman's and Soldier's and the Revolutionary Government, but according to the latest reports, an agreement has been reached, which, it is hoped will have a lasting result.

A naval battle between British and German torpedo boats, occurred off Dover, which resulted in two enemy craft going to the bottom, and others being damaged.

General News.

A Provincial Food Production Conference was held in Fredericton on May 4, at which strong pleas for greater production were advanced. Among other resolutions which were proposed and adopted were the following read by Dr. W. S. Carter:

"Propositions re co-operation of pupils for increased production approved by Board of Education.

"1. That with the approval of the consent of their parents, shall volunteer to aid in the work of increased production, shall be allowed their standing for the present school year without further attendance at school, upon the certificate of the local committee that their work on the above behalf has been satisfactory.

"2. The local committees shall consist of three members each, and shall be organized by the Inspector of Schools for their inspectorial districts in one or more of the most populous or central places in each county, and shall consist of the chairman, or some member of the School Board designated by him, or appointed by the Board, the Secretary of the Board of Trade, Women's Institute or Agricultural Society, in the order named, if one or more of these organizations exist in any local centre and the Inspector of Schools.

"3. The Inspector of Schools shall apportion the territory to be under the control of each local committee, which shall organize itself into a bureau to receive applications from volunteer pupils, and from all parties desiring their services, and which shall distribute the available labor according to their discretion.

"It is understood that volunteers shall not be at liberty to change work or employers without the consent of the chairman of the local committee. Failing to comply with this condition will entail forfeiture of certificate upon which their years standing depends.

"4. Any conditions or difficulties arising in the matter of administration of the above propositions, and not covered by them, shall be dealt with by the local committee, any two of which, the chairman being one, shall be a quorum.

"5. There shall be allowed the sum of 25 dollars by the province in aid of clerical work of each local committee.

Bishop Mills of Ontario, died on May 4. He received part of his education at the Woodstock, Ontario Grammar School. In 1883 he was lecturer at the Montreal Diocesan College Theological School.

A Conference of School Inspectors, etc., with Dr. W. S. Carter presiding, was held at Fredericton, May 5, at which it was decided that the Inspectors should go out through their respective districts, and form local committees, in connection with the campaign for increased production by working on the farms. It is hoped to secure a large number of youthful volunteers for seed time, vacation and harvest.

The Cambridge University (London), is conferring the degree of Doctor of Laws upon Sir Robert Borden.

Prohibition became operative in St. John on May 1.

Racing has been called off in the British Isles, for the duration of the war.

A Win-the-War Convention is expected to be held in Montreal, May 23-25.

King George has issued a request that all his subjects in the British Isles, reduce their food consumption by twenty-five per cent.

Twenty-seven members of the Canadian Parliament are, or have, served in the war to date.

SCHOOL AND COLLEGE.

With a record attendance of over 1,500 members, the ninth annual convention of the Saskatchewan Educational Association opened in Regina on April 10. For the first time in the history of the organization a woman, Miss Christina MacGregor, of Prince Albert, vice-president, presided over the assembly, filling the vacancy made by the death of President Hewgill. So great was the crush of teachers that an attempt to secure a register had to be abandoned until after the great meeting opened.

Approximately 1,000 teachers and trustees registered in Winnipeg as delegates to the 12th annual convention of the Manitoba Educational Association. Five hundred are from Winnipeg and vicinity, the others came from outside points.

The special meeting of the Dartmouth School Board called for recently did not convene owing to the absence of Chairman Earl and Commissioner Cann.

The only business to come before the meeting was the making of the estimates for the present year and the receiving of the report of the Board as a committee re the increase in salaries asked for by the lady teachers of twenty years or more service. The committee has decided to recommend to the Board that those teachers be given an increase of \$50. To avoid any conflict with the lady teachers of shorter service or that they may think that they

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New, usable, and instructive problems for manual training teachers. It has definite suggestions, accompanied with working drawings and illustrations of several hundred various problems, for the construction of aeroplanes, boats, toys, swings, rustic furniture, etc. These problems are all practical for even the youngest. The great success of the year.

The Vitalized School

By FRANCIS PEARSON **\$1.40**

This book is inspirational rather than pedagogical, dealing, as it does, with practice rather than theory. The teacher who feels that she is "getting in a rut" and senses the lack of response and interest in the attitude of her pupils, will get from it a new enthusiasm for her work and suggestions for new methods of approach in her class-room.

Primary Work for Canadian Schools

By ANNA SINCLAIR GRAHAM **60c.**

200 pages. Fully illustrated. The author is a teacher of much experience, who has succeeded in her own work and now makes practical suggestions to her fellow teachers.

Every department of Primary work is covered in a most suggestive manner.

How to Teach

By STRAYER AND NORSWORTHY **\$1.30**

A book in which the authors have sought to make clear the principles of psychology which are involved in teaching, and to show definitely their application in the work of the class-room. It is written in language as free from technical terms as possible. "Strayer, in my opinion, is one of the sanest of American writers." —W. A. MCINTYRE, Principal Normal School, Winnipeg.

NATURE STUDY

Modern Nature Study

By SILCOX AND STEVENSON **75c.**

332 pages. Many illustrations. 12 colour plates. This is a Canadian book by Canadian teachers, using only such material as can be readily obtained. It stimulates interest rather than imparts mere information. A new edition just published contains a new chapter on School Gardens.

Nature Study: A Teacher's Manual

By L. L. WILSON, **90c.**

243 pages. Profusely illustrated. Starting with September, every month in the school year is covered, outlining for the teacher lessons on the animals, birds, weather, flowers, trees, etc., that are peculiar to that month. A complete year's work in Nature Study is here outlined for the teacher.

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are not fairly dealt with, the committee further recommends that this increase shall be given to all teachers after eleven years of service at which time the present arrangement of salaries has reached the maximum of \$400. The increase to those teachers, however, will be made proportionately each year until their twentieth year, when the full \$50 is realized.

A consolidated school will be erected in Viscount, Sask. Citizens are circulating a petition and the proposal is receiving the unanimous support of the ratepayers.

The Greenwood School has contributed and collected the sum of five dollars for the "Belgian Relief Fund Easter Eggs." Outhit Moriarty, Zelda Spinney and Carman Lightizer acted as collectors. The above amount has been forwarded to the Belgium Relief Fund, 59 St. Peter Street, Montreal.

The honor of being the 57th president of the Ontario Educational Association was conferred recently on Dean Pakenham, of the Faculty of Education, University of Toronto.

The Annual Oymkhana of the Rothesay Collegiate School was held April 21,—the prizes being presented by A. C. Skelton.

K. W. Gould who received his education at Guisboro County Academy and Maritime Business College, Halifax, has taken over the publication of the Maritime Retailer as managing editor. Mr. Gould has had considerable newspaper experience and the EDUCATIONAL REVIEW extends congratulations and best wishes for continued success.

MAGAZINES RECEIVED.

We have much pleasure in recommending to our readers notice, the current issues of the following magazines, copies of which have kindly been submitted to us by the publishers: "Canadian Magazine," "Teacher's World" (London), "The School," "Home and Education," "Our Dumb Animals," "Popular Educator," "The Living Age," "School and Society," "Canadian Teacher," "Trinity University Review," "Conservation of Life," "National Education," "Primary Education," "Bird Lore," "The Maritime Farmer," "The School Bulletin," "The School World," (London), "The Canadian Boys," "The Catholic Education," "Utah Educational Review." The "School News" and the "New Republic," all of which have articles calling for special consideration if space allowed.

FROM THE NEW BOOKS.

The average person is called upon in the course of his life, to write letters more frequently than to execute any other sort of literary composition. Very few write books; not many write articles for magazines and newspapers; every one comparatively speaking, writes letters. And upon the character of these letters many important interests in life may depend. Clearness, and good sense and courtesy, or the lack of these qualities, in a business letter, may have an important bearing upon the material concerns of life, the faculty by your pen to convey to a friend your impressions of novel scenes, of the interesting aspects of life around you to beguile the languor of a distant sick room with lively narrative or amusing small talk, conveyed thither by the post,—in a word, to make the friend who is separated from you feel your presence as if you were near—all this certainly adds to the pleasantness of life. The skill to communicate thus by letter is an art worth gaining. While knowledge of the principles of rhetoric and ability in general essay—writing will minister to success in letter-writing, the letter is a rather distinct literary form with virtues of its own. I have known pupils of more than ordinary skill in formal composition to express themselves most unfortunately when attempting to write a familiar letter. Frequently young writers are discourteous, not from any lack of good-will, but because they are unfamiliar with the fashion of letter-writing. Obviously the best way to remove this hindrance is to read good letters. To bring before those that wish to gain skill and ease in letter writing a collection of helpful letters is the first aim of this little book. Letters from many pens, by Margaret Coult, Macmillans of Canada, Toronto, price 25c.

It is a source of pride and satisfaction to me to be able to report once more that the educational system of Ontario, despite the strain and sacrifice entailed by the great war on all classes of our people, is in a sound and flourishing condition. Not only have the male teachers enlisted freely in defence of the Empire, as will be seen in the list appended to this report, but the total number of such enlistments is creditable considering the small proportion of men in the teaching profession, and the fact that many more who desired to offer their services have been prevented by age, by physical disability, or by special circumstances. It should be noted that the women teachers have done their part with zeal and fidelity by exertions in behalf of various forms of patriotic work, and in addition have carried out successfully the duties of teaching the war in the classes according to the program laid down in the Regulations.

The gallantry and fortitude shown by Canadian soldiers on the battlefields bear testimony both to the noble example set by our teachers during many years and to the efficiency of their instruction in the virtues of courage, faith and loyalty. The people of Ontario will not forget the share taken by the schools in preparing the youth of the country in mind and character, to meet and sustain the severe test imposed by the war.

Report of the Minister of Education, Province of Quebec for the year 1916, printed and published by A. T. Wilgress, Toronto.

Nowadays we look upon potatoes as part of our daily food. We cannot imagine an ordinary dinner without them. Yet

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less than four centuries ago they were unknown in these islands. This tells us that the potato plant is not a native of Britain.

Most of us know who brought them from America and most of us also know the story of how Sir Walter Raleigh's cook served up a dish of potato "apples" instead of the tubers. It was not until the gardener was told to destroy the plants that they found the edible tubers beneath the soil. There was no question of destruction when once the secret was out.

We know something about bulbs and sorms, rhizomes and tuberous roots. It is not hard then, to understand that a tuber is a swollen underground stem, or part of a stem laden with food material. We must find a potato and look at it carefully. We find a number of "eyes" on the tuber. They are really buds.

If we have seen potatoes that have begun to "chit" we know that this is true, but if we need to prove the statement then we must cut a portion of a tuber containing an "eye" and set it in the soil. Under the right conditions it will produce a new plant.

Again if we examine a potato plant we see that the tubers are not borne on the true rootlets which are thin and fibrous, but on thicker "rootlets" which are truly underground branches, which spring from the lower end of the stem. Of what use are these tubers to the potato plant? Of what use

are they to us? Just as the moist, firm, white "flesh" supplies us with good food, so it does to the young plant that grows from one or more of the "buds." What kind of food does the tuber contain? Three quarters of a potato is water, the rest chiefly starch, as can be seen by scraping a slice of potato, and examining the scraping, floated in water on a glass side, under a lens. The starch grains are like minute shining cockle-shells. The teachers book of Nature Study Volume II, Evans Bros., London.

The little scheme of toymaking is the natural outcome of certain difficulties facing the infant's teacher who lets the spirit of challenge have any play.

(a) The old object lesson, now known by its truer name of Observation Lesson, is still apt to become too much of a lecture by the teacher.

(b) In any case, it provides for very little self-activity for the child.

(c) Much of the "Kindergarten" material is too inelastic for the demands made upon it in the long and highly elaborated "courses" we have evolved.

Out of these difficulties, the limitations of the Object Lesson, and of the materials used in occupations, has grown the conception of "making," as far as possible, in some form or other, little models of the things around, using in this natural way the ordinary material of any kind as required,

and drawing to the full upon the child's instinct for constructiveness. Just as by drawing and painting the idea of a flower studied is most naturally expressed, so by paper and cardboard, reel and matchbox, the ideas gathering round "Kitchen," "The Park," etc., are most effectively expressed. What we see we make: "What we make we see." The Teachers Book of Toy Making, by Clara E. Grant, Evans Bros., London.

By pencil-drawing is not simply meant drawing with a blacklead pencil, as some people might imagine. We mean all forms of pencil and hard points. Thus, besides the ordinary blacklead pencil, we include Conte Crayon, Certa Lævis, Charcoal and Stump, and any other hard point used in drawing. The general term for this kind of work is firm point drawing, in contradistinction to soft or flexible point drawing as applied to the brush. Broadly speaking, there are two methods or styles of shading with pencil or hard point. The first is what we will call, for want of a better name "mass" or "solid" shading, and the other is well known as "line shading" or "hatching."

The mass or solid method is the one we shall first deal with and explain, and it can be used by all children of any age from the juniors to the top classes in the senior school. In this method the pencil is simply rubbed backwards and forwards until the surface is smoothly covered to the required tone, without any interstices showing in the shading. This is the style which every child naturally adopts, if it is asked to shade any drawing unaided by any instruction on how to shade. It is one of the recognized methods of shading in all art schools, so our readers may confidently adopt it in their classes. The "line" method is the system of representing shade by lines only, very closely packed together, and sometimes crossed. Pen and ink sketches are, for obvious reasons, done in this style, and many magazines, such as "Punch," "The Strand," etc., are largely illustrated by this means. We recommend our readers to carefully look at the sketches in "Punch" for this style of work. No higher sanction than that of "Punch" is needed throughout the world.

The book of pencil drawing, by E. A. Branch, Evans Bros., London.

It is important to remember, especially in view of the growing introduction of "Individual Occupation" work, that children are now getting very largely only their own talk, without the corrective and enriching assistance once given them by their teachers.

In the Montessorian method, *e. g.*, the child acquires his teacher's help individually — just the word he, himself wants at the moment, and the Montessorian apparatus is singularly lacking in objective interest, so that, even when acquired, his field of vocabulary is a narrow one, and this limitation becomes intensified when nursery rhymes, fairy stories, and collective games are excluded.

Phonetic Training — then, again, it is necessary to guarantee that the area of "sounds" is covered more definitely than is possible in chance converse — to make sure, *i. e.*, that we are developing power to articulate all possible sounds, together with a kind of "mental science" of particular sounds. The phonetician who drills "babies" in sounds, and the Montessorian teacher who helps her children to "trace" sand letters will reply that this aim is met by these exercises, but we

think the time has come to recall the old psychological truth that little children are not interested in separate sounds as such. They demand words and things as the basis of speech interest, and, therefore, it seems better to take the whole word as the vehicle for securing.

(a) Power in articulation.

(b) An appreciation of sound-values.

(c) Gradual extension of vocabulary.

The Teachers Book of Language Exercises, by Clara E. Grant, Evans Bros., London.

War's demand for a dry nation will be pointed out by Representative Edwin Yates Webb, chairman of the House Judiciary Committee, and author of the Webb-Kenyon Act, in *The Sunday School Times* of May 5. The Webb-Kenyon Act empowers the individual states to prevent liquor shipments from wet states into their own borders. The masterly manner in which Mr. Webb drew this act was attested when the Supreme Court in January declared it to be constitutional. Congressman Webb says:

"If our national life is at stake, our soldiers and sailors are the prop upon which such a life rests, and every drunken or drinking member of our armed forces weakens to that extent our national prop. The statement seems to me to be axiomatic. If so, then it is unthinkable that our great country, while in a life and death struggle, should permit one drop of whiskey to go into the hands or mouths of its fighting forces. We should, therefore, have by all means a law prohibiting, under severe penalties, selling or giving intoxicants to any soldier or sailor of the United States.

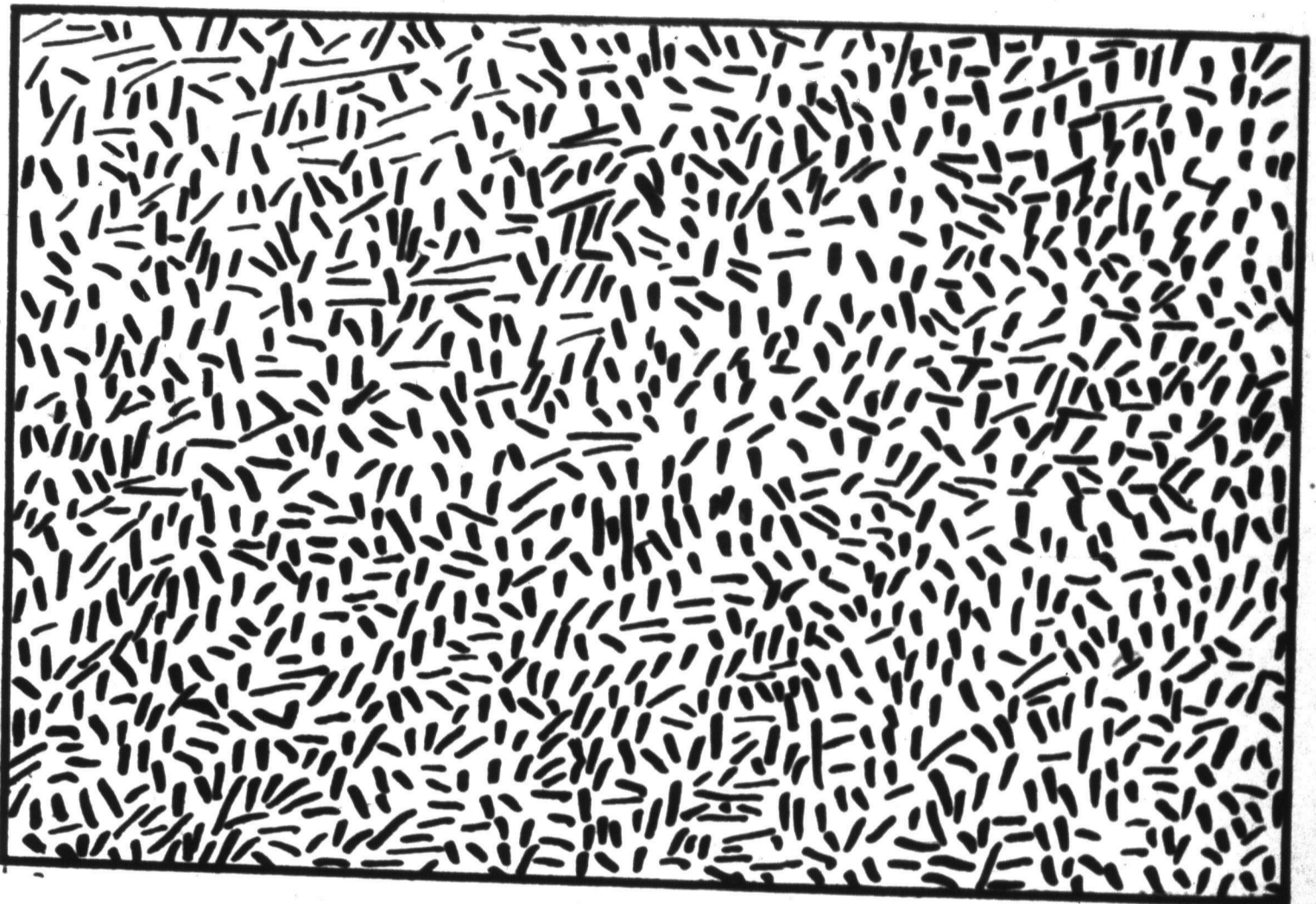
"But a sober army cannot long endure if it is dependent upon a drinking or drunken population."

Mr. Webb states "that the President and his advisers have the liquor problem now under consideration," and then he goes on to show what Congress could do to give us National Prohibition. It is a timely utterance, and should be read in full as it appears in *The Sunday School Times*, published by *The Sunday School Times Co.* 1031 Walnut Street, Philadelphia.

Mosses with a Hand-Lens is the title of a book of 208 pages, dealing with the more common and more easily recognized mosses and Liverworts of the North-eastern United States and Eastern Canada. The work, while provided with easily worked keys to the families and genera, and with clear, concise, descriptions to the species, is non-technical in character. In this particular lies one of its chief values to the ordinary botanist, and the students of nature-study in general. The book is printed on good paper, is neat and attractive in appearance, and very beautifully illustrated throughout. Nature students and botanists have many calls for just such a work as this. Price by mail, \$1.75. For sale by the Author, A. J. Grout, Ph.D., New Dorp., Richmond Co., Borough of Brooklyn, New York City.—H. G. P.

Dean William Pakenham is a gold medal graduate of the Ottawa Normal School, and an honor graduate in modern languages of the University of Toronto. For a number of years he was a Public and High school teacher, and between the years 1902 and 1906 was principal of the Technical School.

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- 25 prizes** of one years free subscription will be awarded to the contestants whose solutions are nearest to the correct number after the above awards have been made.

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You may submit as many solutions as you desire, but each must have one subscription enclosed with same.

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EDUCATIONAL REVIEW,
St. John, N. B.

whose decision in the contest must be considered as absolute and final.

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N. B. OFFICIAL NOTICES.

Propositions re Co-Operation of Pupils for Increased Production, Approved by Board of Education.

(1) That with the approval of the local School Board, all pupils in good standing May 1, 1917, who, with the consent of their parents, shall volunteer to aid in the work of increased production, shall be allowed their standing for the present school year without further attendance at school, upon the certificate of the local committee that their work on the above behalf has been satisfactory.

(2) The local committees shall consist of three members each, and shall be organized by the Inspectors of Schools for their Inspectorial Districts in one or more of the most populous or central places in each county, and shall consist of the Chairman, or some member of the School Board designated by him, or appointed by the Board, the Secretary of the Board of Trade, Women's Institute or Agricultural Society, in the order named, if one or more of these organizations exist in any local centre, and the Inspector of Schools.

(3) The Inspector of Schools shall apportion the territory to be under the control of each local committee, which shall organize itself into a bureau to receive applications from volunteer pupils, and from all parties desiring their services, and which shall distribute the available labour according to their discretion.

It is understood that volunteers shall not be at liberty to change work or employers without the consent of the Chairman of the local committee. Failing to comply with this condition will entail forfeiture of certificate upon which their year's standing depends.

(4) Any conditions or difficulties arising in the matter of administration of the above propositions, and not covered by them, shall be dealt with by the Local Committee, any two of which, the Chairman being one, shall be a quorum.

(5) There shall be allowed the sum of twenty-five dollars (\$25.00), by the province in aid of clerical work of each local committee.

All pupils willing to volunteer for service under the above conditions, and in accordance with the regulations of the local committees should send their names either to the School Inspector for the district, or the Secretary of the local committee.

The School Inspectors will be relieved from their regular duties to assist in organizing and to aid in stimulating increased production.

During the summer vacation, Director Peacock will organize the Household Science teachers of the Province to instruct and give demonstration in as wide an area as may be reached, in canning and the prevention of waste.

W. S. CARTER,
Chief Superintendent of Education.

Education Office, Fredericton, N. B.
May 7, 1917.

The self survey of the Columbus, Ohio, schools started by Superintendent John H. Francis, formerly of Los Angeles, took up ten general questions: Pupils of school age, teachers, curricula, school buildings, their equipment and grounds, special types of schools, school finances, organization, character of the city, school co-operation with other child welfare organizations; and enlarged use of the school plant.

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April 12th, 1917.

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OFFICIAL NOTICE.

New Brunswick School Calendar,
1917

1917. SECOND TERM.

- May 18 — Loyalist Day (Holiday for St. John City only).
- May 22 — Exams. for Class III License begin.
- May 23 — Empire Day.
- May 24 — Victoria Day (Public Holiday).
- May 24 — Last Day on which Inspectors are authorized to receive Applications for Departmental Exams., Reg. 38-6.
- June 3 — King's Birthday observed (Public Holiday).
- June 8 — Normal School Closing.
- June 12 — Final Exams. for License begin.
- June 18 — High School Entrance Exams. begin.
- June 29 — Public Schools close for Term.

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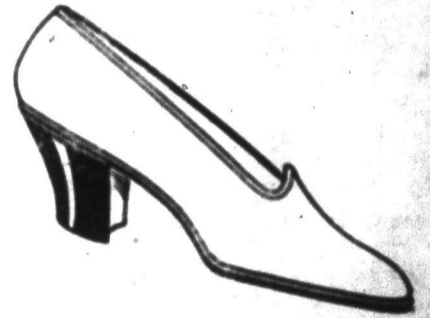
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EDUCATIONAL REVIEW

MRS. G. U. HAY, PROPRIETOR.
PERCY GIBSON, MANAGER AND EDITOR.

Volume XXX

ST. JOHN, N. B., CANADA, 1916.

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