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question of *trained vs. untrained* teachers for the rising generation receive so little attention? Severe penalties are enacted against quack doctors; empiricism is seldom urged against those who, without training, perhaps without even much consideration, presume to form, equip, regulate, in short, to educate immortal minds.

Of this subject more again.

What are Kindergartens?

This is a question we have often been asked, and have always taken great pleasure in answering. The name is no doubt strange to many of our readers; but when they know its true meaning, "the Kindergarten" will be a favorite word in every home in the land. The Kindergarten is a bridge between the nursery and the school, in which the mind of the child is *educated by labor*. The Kindergarten materials are not alphabets, and books, and copy-books, but wooden blocks, planes, little sticks, strips of different colored papers, pasteboard, colored threads, slates and pencils, and sheets of paper. Long before a child can learn its letters, it will readily learn how to do a great many things. Little children do not understand a twentieth part of the lessons learnt in text books. The ideas of grown people are given to them too early. Children who do not understand what they are set to learn will naturally fall into listlessness and idleness; from this to restlessness, for the young mind *must be engaged*; from restlessness to mischief—and so the character is warped in childhood and can never be straightened. The inventor of the Kindergarten, Froebel, has benefited humanity. Let our children be taught in these schools by the eye and the hand, to measure, to weigh, to fit together, to build, to cut, to arrange, to observe sizes and positions, to draw, and by this means they will acquire more practical knowledge in a month than they could get from text books in several years. Let the child take to its favorite occupation—whether drawing, or building a house, or making a bridge, or imitating a doll's dress, or counting on the sticks—and while the ardent mind is thus pleasantly engaged in learning or in trying, there is going on the best discipline for after years. With such teaching it will be easy to fight down coarseness and restlessness, and many children will be saved to be good and great men, who might have run away, or become lost and demoralized by beginning to learn under the dry and unattractive text book system. This is what the Kindergarten means, and we hope to see before long every infant school throughout Canada conducted on the Kindergarten principle. There are many such schools throughout the United States, and wherever established, readily find favor among the people.

The following from the *London Advertiser* will explain Froebel's system:—

"Half a dozen boxes of children's toys, with innumerable pamphlets and fly-sheets descriptive of how to use them, have been placed in our hands by Herr E. Steiger, of New York, a manufacturer of the articles used in the Kindergarten system of instruction. Though by no means a new thing, the system of directing the play of young children so as to minister to their education is uncommon and deserves description in detail. Friedrich Froebel was a German who had been brought up without maternal care, and like most children he found the restraints of early school life very irk-

some. He devoted a lifetime to perfecting a system of instruction for boys and girls from three to seven years of age, having adopted for his motto the pretty phrase 'Kommt litzelzitz uns unsem Kindern loben.' Judging very rightly that neglect or mistakes in the nursery endanger health and happiness in after life, he sought to direct the mental and physical energies of children in the right path from the time they were able to receive impressions and classify them. Cramming the memory with indigestible facts was the shoal to be avoided, and children's natural tendency to play was the characteristic to be utilized. Through play the faculties of mind and body are developed, and when properly directed, habits of industry, perseverance, order and regularity are acquired. Amusement and instruction are to be combined in the use of Froebel's 'gifts,' as he calls the implements of his system. In Germany many Kindergartens are established, and in parts of the United States the system is viewed with favor. It is even proposed to engraft it upon the public school system.

"The toys are simple and inexpensive, yet capable of infinite variations. There are little sticks of various lengths, perforating paper, a slate for drawing, paper of various colors cut into lengths for plaiting and weaving, &c. With this, children seated at a table, divided off on the top into squares of one inch, are set to work. Patience and adaptation to the business are necessary for the teacher, who must possess the confidence of the children to be able to direct their movements. Of the effect upon the little pupils, observers say that the Kindergarten develops a capacity for quick and clear perception of form, size, color and sound; it trains all the senses, gives skill to the fingers, health to the body, cheerfulness to the mind, trains the moral faculties, and is a primary school for design, where the artistic tendencies of the child are cherished and cultivated, so as to materially increase the means for his future usefulness and happiness. None of his faculties are allowed to die out through disuse.

"Perhaps an idea of the system can be given better by the account of a visit to a Kindergarten than by seeking to impress what most thinking persons will readily admit—the strength of the impression a child receives at an early age while at play. A visitor narrates that he found the children forming a pretty star shaped figure upon the tables in one of them, being guided by the teacher, who told them where to place each piece. Each was then told to produce figures of his own invention, using all the pieces, the result being some wonderful combinations."

We clip a continuation of the description:—

"This is the method with all the occupations: First, the little ones are led; then they are allowed to go alone. Then came some very simple and easy exercises upon slate, marked off in squares like the blackboard, from which they copied their work. They each made such picture as pleased them best. In all their work they had the sympathy and encouragement of Miss Held, praising them when it was done well, and helping on those who needed assistance.

"After this occupation was concluded, folding doors were opened into a room still larger, also sunny and bright, and the children marched in to the music of a pretty song, in which all joined. There for half an hour a series of games were played, uniting singing, simple gymnastics, and

sport, to the intense delight of the participants, and the by no means slight enjoyment of the lookers-on. These games have all a meaning and an object, and are arranged with a view to the harmonious and healthy growth of the child's mental, moral and physical nature.

"After a short lunch, the occupations were resumed. When they first gathered around the tables, it seemed not unlike the assembling together of quite a number of ladies at a tea party, the conversation was so brisk and sociable, but in three or four minutes each child was intently engaged in sewing in and out with colored worsteds. It was not like a school, there was no repression, no enforced silence, no fears of the raw-hide or the teacher's frown, no books, no punishments; it was rather like a cheerful workshop where each was absorbed in his work, not as a disagreeable task, but rather as a delightful occupation. Strict silence was by no means enjoined, and if after a few minutes of employment a happy thought occurred to any little worker, he was encouraged to speak it out, and when any one was pleased, he was allowed to laugh. While the rest were at work, it occurred to a bright-eyed little fellow that he would like to recite a verse; leave was granted, and we undoubtedly got the benefit of his last exercise at the Sunday-school. A little girl followed with a verse that was evidently original, and none the less interesting for that; and then one volunteered a song. The charming innocence and unconscious simplicity displayed in their little interludes, were fascinating. There was apparently no thought of showing off, nothing got up beforehand for the occasion, but they were spontaneous outbursts of their happy childish natures, mingled with an evident desire to do something that should meet with the approval of their friend, Miss Held. Still the work went on and the beginning of very pretty designs was wrought out. The children seemed happy, but not boisterous, attentive to their play work, but not stunted into stupid apathy. It was order, and such order as seemed the outgrowth of the individual of each child. And yet they had only been two or three months together, at longest, and most of them a much less time. How such order could be wrought out of the chaos that must have existed on the first day, is a mystery which one could hope to solve only after frequent and prolonged visits.

"The occupations are varied every day, and we only regret that our stay was too short to permit us to see the 'Building,' 'Weaving,' 'Folding,' 'Peas Work,' 'Moulding in Clay,' and other works which they do."

In nineteen of the Mexican States there is gratuitous and obligatory instruction. They have 8,103 schools and 369,000 pupils. The instruction consists of reading, writing, Spanish grammar, arithmetic, the system of weights and measures, "morality and politeness." In addition, they teach in nearly all the schools the duties and rights of the citizen.

John Howard was born in 1726; made sheriff of Bedford in 1773; inspected English prisons, and gave parliamentary evidence thereon, 1773-5, which led to imprisonments. He afterwards visited prisons all over Europe, and died of a fever, contracted in visiting a pestilential Russian dungeon at Kherson, on the Black Sea, in 1798.

Contributed.

The Centennial and Its Educational Features.

No. 4.—Continued from Last No.

Since the last article was written, the great Exhibition at Philadelphia has been formally closed, and must now be spoken of in the past tense. This article will be devoted to a brief reference to the educational exhibits of some of the other States of the American Union.

MASSACHUSETTS.—The exhibit of this State was in the gallery over the east end of the Main Exhibition Building. This State made a very extensive and very creditable exhibit. Foremost among these were specimens of drawing, exhibiting the manner in which drawing is taught in the schools. For instance, some of the specimens showed how drawing and botany are taught simultaneously. Any plant may be selected; then the pupil is taught to draw its various parts, at the same time learning their names; then these are combined so as to form various figures by which the whole is indelibly impressed on the memory, and at the same time facility is acquired in drawing. An object of interest was an album containing photographs and autographs of all the leading historians, statesmen, orators, and other noted men of the State. Like other States, the exhibits here were largely composed of specimens of work by the pupils of the various schools. A prominent object of interest was the exhibit of the Boston Public Library, which contains 100,000 volumes, and is so perfectly conducted that not more than 100 volumes are lost annually.

OHIO.—The exhibit of this State, and of all the other States yet to be mentioned, was in the South Gallery of the Main Building. This State made a very good display. On large sheets, having a white background, red circles indicated by their comparative size the extent to which each branch of study is pursued in the schools. It was worthy of note that the smallest circle of all was that representing moral instruction, and though this fact did not seem to speak well for the moral training the pupils were receiving, the gentleman in charge expressed the opinion that other States could make no better exhibit, if equally honest. A good deal of pains was taken to show by means of maps the school statistics of the State. From all that Ohio showed, it is evident that her schools are in very efficient condition, and that her teachers and superintendents are among the best in the Union. The city of Cincinnati made a splendid exhibit, showing 91 volumes of school work, of which 16 were German. In the Cincinnati schools a great deal of attention is given to music. The city of Cleveland also made a large exhibit, two features of which are worthy of special mention. Cleveland has a system of her own in teaching drawing. About an hour and a half a week is devoted to it throughout the entire school year. Pupils begin with line drawing on slate and black-board, and then pass on to drawing of objects. Music is also introduced in the first school year, and continued throughout the entire course. Specimens of written examinations were very creditable.

ILLINOIS.—The exhibit of this state was at the extreme west end of the South Gallery of the

Main Building. Like all the others, it was largely made up of specimens of school work. Upwards of sixty volumes of work from twenty-five High Schools were shown, including the Chicago High School. The Illinois Industrial University, situated at Urbana, and founded in 1868, has a very prominent place in this exhibit. This University owns 25,000 acres of land, besides invested funds amounting to \$350,000, buildings valued at nearly \$500,000, and a library of 10,000 volumes.

IOWA.—This State, one of the most recently settled, exhibited very prominently her school statistics, showing the wonderfully rapid progress of education in the State. In 1850 there were only 869 schools in the State; in 1860, 4,927, and in 1875, 9,610. In 1850 there were only 928 teachers; in 1875, 18,145. In 1850 there were 64,100 scholars; in 1875, 533,000. The expenditure for education in 1850 was \$71,219; in 1875, \$4,665,949. The other exhibits consisted almost entirely of work from the schools.

MISSOURI.—The exhibit from this State was comparatively small, being confined chiefly to the city of St. Louis. The exhibit of the thirteen Kindergartens in that city was highly interesting. Some very excellent work from the grammar schools was shown, and also photographs of school buildings, and Kindergarten rooms.

TENNESSEE.—This State had her exhibit in the east end of the South Gallery. The chief object of attention was a large and very finely executed painting of the Jubilee Singers of Nashville. The painting was certainly good enough to merit a place in the Art Gallery. The exhibit from this State was largely composed of specimens of work from the negro schools.

RHODE ISLAND.—The exhibit of this State was largely made up of specimens of work done in the schools, five towns sending two hundred and twenty volumes of scholars' work. There were some very creditable specimens of drawing, and no less than eighteen volumes of map drawing. There was an album containing photographs of the faculty of Brown University and the class of 1876.

NEW HAMPSHIRE.—This State made a very good exhibit, though not as extensive as some of the others. It consisted, as usual, of volumes of scholars' work, slate work, and a few drawings. There was a handsome model of the Manchester grammar school building, and a map in relief of the White Mountains country.

CONNECTICUT.—Yale College made the most prominent display in this exhibit, showing no less than eleven hundred volumes of work either written or edited by pupils or professors of the College. A statue of Abraham Pierson, the first President of the College, stood in the centre of the room, and on the wall was hung a map showing the location of every school-house in the State. There was a large amount of scholars' work, including some work by Chinese students.

NEW JERSEY.—This State made a more complete exhibit of school work than any other. There were altogether 437 volumes of work on exhibition, containing 15,500 specimens of work done in the schools. Of the teachers of the State, ninety-six out of every hundred contributed specimens. The work was generally good, well classified, and calculated to give the impression that the New Jersey school system is one of the best in the Union.

The Old Log Cottage School.

Gratefully Dedicated to My First and Most Respected Teacher, Mr. J. McIntyre.

BY T. HAGAN.

The old log cottage school house, John,
I think I see it yet,
It's but a step from two cross roads—
Where you and I oft have met;
The same board fence encircles 'round;
'The bell—well we had none—
But how we guessed the time, dear John,
By looking at the sun.

What anxious boys we went to school,
To learn to read and write;
Filled with the loftiest notion then.
And future just as bright.
How proud we sat upon the bench
And plumed each word at will,
And smiling 'round—why, John, I think
We're in the old school still.

Just look, right there the blackboard is,
The teacher's desk in front,
On either side we stood in class
And read and "trapp'd" quite blunt;
But then these were the good old days
Ere style had stalk'd abroad,
And neatly prudish pupils now
Would call "our way" a fraud.

And when we show'd an active mind,
How pleased the teacher's look,
How like the morning's golden ray
He smiled upon his book,
And spoke of what we'd surely make,
And of a fame in store
For those who had their lessons well
And o'er their books would pore.

And then the sports we us'd to play
Upon the old school green,
How very little like, dear John,
The games that now are seen;
When with a group on either side
We "hail'd" the ball with "over,"
That bounding down the old gray roof
In some one's hands did hover.

Well, well, times chang'd, and with it, John,
We've cross'd the path of youth,
And manfully bearing each his part,
Let's crown our lives in truth,
That when the silvery locks of age
With death droop 'round in dual,
Our happiest thoughts may find a theme
In the old log cottage school.

The following was the programme prepared for the meeting of the Lennox and Addington Teachers' Association, held at Napanee, on Saturday the 25th ult:—"A Lecture on School Law in its Relation to Teachers," by the President; "Theory and Practice of Square and Cube Root," Mr. Magee; "A Reading," Mrs. Pomeroy; "Analysis and Parsing," Mr. Sweet; "Chemical Experiments," Mr. Tilley. F. Burrows, President; Wm. Tilley, Secretary.

Exeter pays \$1,500 per annum in salaries to their school teachers, and \$125 to a caretaker. Brussels pays \$1,500 in salaries to their teachers.

Ancient History.

QUESTIONS AND ANSWERS, BY W. R. BIGG, ESQ.,
INSPECTOR OF PUBLIC SCHOOLS, BROCKVILLE,
ONT.

(Q.) 92. Name the different battles fought between the Persians and the Greeks in the reign of Xerxes (the Ahasuerus of Scripture.) Particulars and dates.

(A.) Leonidas, with 300 Spartans, withstood the Persians for three days at Thermopylae, till a Greek, named Ephialtes, betrayed to the Persians a path across the mountains, which enabled the Persians to attack the Greeks in the rear. Leonidas and his little band, with other volunteers, who made up the number to about 2,000, were cut to pieces, B. C. 480. The Persians, however, suffered a severe naval defeat at Salamis, by Themistocles, assisted by Aristides, B. C. 480.

Then followed the battles of Plataea and Mycale, B. C. 479. In the former, 300,000 men, commanded by Mardonius, the Persian general, were routed by the Greeks under Pausanias and Aristides, and on the same day the remnant of the Persian fleet that had escaped at Salamis was utterly destroyed at Mycale, by the Greeks under Leotychides, the Spartan King.

(Q.) 93. Name the Seven Wise Men of Greece, and also the Seven Wonders of the World.

(A.) The Seven Wise Men were—Solon, the legislator; Thales, of Miletus; Bias, of Priene; Chilo, of Lacedaemon; Pittacus, of Mitylene; Cleobolus, of Rhodes; and Periander, of Corinth. The number is sometimes increased by the addition of Anacharsis, the Scythian, and Espimenides, the Cretan.

The Seven Wonders of the World were:—The Temple of Diana, at Ephesus, in Ionia; the Tomb of Mausolus, at Halicarnassus, in Caria; the Pyramids of Egypt, the Walls and Hanging Gardens of Babylon, the Labyrinth of Egypt, the Colossus of Rhodes, and the Statue of Jupiter Olympus at Athens, 75 feet high, sculptured by Phidias in ivory and gold. The Pharos, or watch-tower, built by Ptolemy Philadelphus, King of Egypt, is sometimes added to the list.

(Q.) 94. What leader of the Alcmaeonids is said to have instituted the process of Ostracism? Name.

(A.) Cleisthenes. His chief opponents were Isagoras and Cleomenes, the Spartan King.

(Q.) 95. When was Confucius born, and what philosopher was his contemporary?

(A.) About 550 B. C. His contemporary was Pythagoras.

(Q.) 96. What prophet is connected with the close of the Old Testament history? Give the date.

(A.) Malachi, B. C. 430.

(Q.) 97. Of what party amongst the Athenians was Pericles, the representative. Give the date of his administration, describing its effect on the prosperity of Athens, and name who was his rival.

(A.) Pericles, (son of Xantippus, the conqueror of Mycale), was the representative of the democratic faction, and his rival, Cimón, (son of Miltades), headed the aristocratic party.

The administration of Pericles dates from B. C. 460 to B. C. 429, during which time he governed with kingly power. Abroad he was everywhere triumphant, particularly in the Samian war, B. C. 440, and Athens became Queen of the Sea. The arts and sciences, with commerce, made rapid advances; schools of philosophers and orators were formed,

and elegance and perspicuity of expression became an enviable distinction. It is to the patronage of Pericles that Athens owes the glory of being the country of literature and the arts.

(Q.) 98. Give the particulars relative to the cause, the events that ensued, and the final results of the Peloponnesian war, and also the names of some celebrated warriors, philosophers, and statesmen, who flourished during that period.

(A.) The rivalry existing between Athens and Sparta, coupled with the hostility between the Ionian and Dorian races, the former favoring democracy and the latter aristocracy, broke out into a contest known as the Peloponnesian war. The immediate occasion of the war was a conflict between Corinth and Corcyra, brought about by a revolt in the Epidamnus, the colony of both. Athens supported Corcyra in the contest, and at the same time was involved in a war against Potidaea, a Corinthian colony which she wished to subjugate, and which Sparta determined to protect. The cause of Sparta was embraced by all the Peloponnesians except the Argives, who remained neutral; beyond the Isthmus she was supported by Megara, Phocis, Locris, Boeotia, &c. The allies of the Athenians were Chios, Lesbos, Plataea, Corcyra, Naupactus, Acarnania, Zacynthus, &c. The Spartan King, Archilamius, invaded Attica B. C. 431, while the Athenian fleet ravaged the Peloponnesus, and Pericles devastated Megara. In the second year of the war Potidaea surrendered, and the third year was marked by the outbreak of the plague and the death of Pericles. The fourth year was signalised by Lesbos revolting from Athens; but it was subjugated in the following year, its chief city, Mytilene, being forced to surrender. In the same year Plataea capitulated to the Spartans, who, by desire of the Thebans, butchered the surviving men, and made slaves of the women. The town was afterwards razed to the ground. In B. C. 425 the Sphacteria was taken by the Athenian Cleon, but in the following year the Athenians were defeated at Delium by Brasidas, the Spartan general. In B. C. 422 both Brasidas and Cleon were slain at Amphipolis, the victory remaining with the Spartans. After this followed the peace of Nicias, B. C. 421, which gave a temporary rest to the combatants; but the war was again revived by the ambition of Alcibiades, a pupil of Socrates and a nephew of Pericles. In B. C. 418 the Spartans gained the battle of Mantinea against the Argives, which at once restored the military glory of Sparta.

Then followed the fatal Athenian expedition to Sicily, under the command of Alcibiades, Nicias, and Lamachus: but the first having been accused of sacrilege, and fearing to obey the orders of recall, contrived to escape to Sparta, and became the enemy of his country. The fleet and army of the Athenians were defeated at Syracuse by Hermocrates and Gylippus, and ultimately destroyed, B. C. 413. Alcibiades was now recalled by his fickle countrymen, chiefly through the influence of Thrasybulus, and the period of his second government was the most brilliant of the whole war, comprising the naval battles of Cynossema, Abydos, and Cyzicus, in the latter of which the Spartan commander, Mindarus, was slain, the army fled, and the entire fleet became the prize of the Athenians, B. C. 410. In the following year Chalcidion was compelled to surrender to Alcibiades, but he was in turn defeated by Lysander at Ephesus, B. C. 407, and was driven into a second exile. In B. C. 406 the Athenians gained the battle of Ar-

ginnao, the Spartan admiral, Callicratidas, being killed.

Lysander having taken Lampsacos B. C. 405, shortly after surprised the Athenian fleet at Egos Potamos and destroyed it; he then invested Athens by land and sea, when it was compelled to surrender, B. C. 404, on the following terms:—"That the fortifications should be demolished; that all ships except 12 should be delivered up; that all the exiles of the oligarchical party should be recalled, that henceforth Athens and Sparta should have the same friends and the same enemies; and lastly, that Athens should acknowledge the supremacy of Sparta both by land and sea." Thus ended the war which had lasted for 27 years; the government of Athens was entirely changed, and all authority placed in the hands of 30 Archons, known as the Thirty Tyrants. Besides those already mentioned must be added the names of Eschylus, Sophocles, Euripides, Aristophanes, Thucydides, and Socrates, who flourished during the war.

(Q.) 99. What celebrated Athenian exile succeeded in defeating the Thirty Tyrants and restoring the old form of government, and by whom was he assisted? Give the date.

(A.) Thrasylbus; he was assisted by the Spartan King, Pansanias, who was jealous of Lysander. B. C. 403.

(Q.) 100. Give the particulars of the battle of Cunaxa, and the subsequent events connected therewith.

(A.) On the death of Darius Nothus he was succeeded by his son Artaxerxes Mucnon, B. C. 405; but his brother Cyrus plotted against him, and having obtained the assistance of 13,000 Greek mercenaries commanded by Clearchus, attempted to dethrone Artaxerxes. In conjunction with his own army of 100,000 men under Ariæus, they set out from Sardes, and were met at Cunaxa by Artaxerxes with 1,200,000 men. In the battle which ensued Cyrus was slain in the moment of victory. Then commenced the retreat of the Greeks to their own country, B. C. 401, and Clearchus having fallen by treachery, the command devolved upon the celebrated Xenophon, whose history of the retreat of the 10,000 (the Anabasis) has immortalised this unexampled march.

(Q.) 101. What form of government was instituted at Rome after the expulsion of the Tarquins, and what changes were subsequently made?

(A.) A republican form of government: the power of the Kings was transferred to two prætors, afterwards consuls. The first prætors were Junius Brutus and Tarquinius Collatinus. The next change consisted in appointing Larcus the first Dictator, B. C. 493. Then the office of Tribune was created, their number being increased from two to ten, the latter being known by the name of Decemvirs.

(Q.) 102. What efforts were made to restore the Tarquins?

(A.) A conspiracy was formed, including among its members the two sons of Brutus, and the Aquilus the nephews of Collatinus; but the plot being discovered, they were condemned to death. Tarquin, only remaining resource was arms, and assisted by the Veians he attacked the Romans, under the command of Brutus and Valerius; but although Brutus was killed, the Romans were victorious. Subsequently Tarquin prevailed upon Lars Porsenna, one of the Kings of Etruria, to espouse his cause; he overran the country, defeated the Romans, and marched directly to Rome and laid siege

to that city, when, in spite of a brave resistance, particularly the defence of the bridge by Horatius Coclès, Porsenna reduced Rome. The battle of Lake Regillus, B. C. 497, in Tusculum, destroyed all hopes of restoration, and Tarquin having outlived all his children, died at Cumæ B. C. 494.

(Q.) 103. Sketch brief historical notes on Coriolanus, Cincinnatus, and Camillus.

(A.) Coriolanus, a patrician, who had distinguished himself against the Volsci, and taken Corioli, their capital, whence his surname, displayed great arrogance towards the plebeians, especially when he insisted that they should sell their right to have Tribunes, for a supply of corn in famine times, and he obstinately resisted the right claimed by the Tribunes of summoning patricians before the tribunal of the Commons. Being driven into exile B. C. 475, he found refuge at Antium, a Volscian town, and soon returned at the head of a Volscian army to besiege Rome. The tears of his mother Veturia availed more than the entreaties of the Senate or the adjuration of the priests, and Coriolanus was induced to draw off his army, remarking to his mother, "Thou hast saved Rome, but lost thy son." His subsequent fate is uncertain; by some he is said to have been slain by the Volscians, whereas others represent him as having lived among them to an advanced age.

Cincinnatus. The disputes between the patricians and the plebeians concerning the Agrarian Laws induced them once more to have recourse to a Dictator, and they fixed upon Quintus Cincinnatus, whom the deputies of the Senate found holding the plough. Cincinnatus acceded reluctantly to the Senate's pleasure, and having restored tranquillity he retired from office, and again devoted himself to the pursuit of agriculture. He had not long retired when a fresh exigence of the State once more required his assistance: the Aequi and Volsci had hemmed in the Roman army, B. C. 456, in a defile between two mountains, when the Senate again appointed him Dictator, as the only person on whom Rome could place her dependence. Collecting an army, he soon relieved the consul Minutius, and rescued the Roman army from destruction, after which he again resigned the Dictatorship, and once more retired to his farm, having declined all offers of emolument.

Camillus. The Veians had long been the rivals of Rome, and had taken the opportunity of internal distresses to ravage its territories. It was accordingly determined that Veii should fall, and Furius Camillus, having been appointed Dictator, laid siege to Veii, which was taken after a protracted siege of ten years, B. C. 396. He next defeated the Falisci, and besieged Aril took their capital, Falerii. He is also said to have caused the rebuilding of the city of Rome after its almost total destruction by the Gauls, under Corerms, B. C. 390, in opposition to the proposal to remove the seat of government to Veii, and hence was called a second Romulus. He died B. C. 355.

(Q.) 104. What event was mainly instrumental in causing the abolition of the Decemvirate?

(A.) The murder of Dentatus, the Roman Achilles, and the brutal outrage of Appius Claudius in attempting to obtain possession of Virginia, whom her father stabbed to the heart rather than let her fall into his hands, brought on a revolution which resulted in the deposition of the Decemvirs and the restoration of the Tribunes, B. C. 449.

(Q.) 105. When was the Peace of Antalcidas concluded, and what were its provisions?

(A.) In B. C. 387: its provisions were "that the Greek cities of Asia, and the islands of Clazomene and Cyprus, should be subject to the King of Persia, but that all other Greek towns should be independent, except Lemnos, Imbros, and Syros, which should belong to the Athenians."

(Q.) 106. Under what celebrated individuals did Thebes rise to eminence? Give the particulars and dates of the battles of Leuctra and Mantinea.

(A.) Under Pelopidas and Epaminondas. Phœbidas, a Spartan general, had seized the Cadmea, B. C. 383, and put to death Ismenias, the popular leader, but 300 of the party, including Pelopidas, escaped. Subsequently the latter returned by night, and being joined by Charon, liberated the city, and expelled the foreign garrison. Athens sent assistance to Thebes, and Pelopidas, chiefly with the aid of the famous Sacred Band, consisting of 300 chosen and well disciplined Thebans, secured the supremacy of Thebes in Bœotia. Athens then deserted her ally, and Thebes maintained the struggle alone. In B. C. 371, the Spartan king, Cleombrotus, marched into Bœotia, where the great battle of Leuctra was fought, in which Cleombrotus was killed, and the Theban army, commanded by Pelopidas and Epaminondas, gained a brilliant victory. But the severest blow that Epaminondas inflicted on Sparta was in B. C. 369, when, having ravaged the Peloponnesus, he restored the independence of Messenia, and built Messene at the foot of Ithome. The Thebans then invaded the Peloponnesus, but were unsuccessful in reducing Sparta. Some years later, Pelopidas fell at the battle of Cynoscephale, in Thessaly, in which the Thebans were victorious, B. C. 364, and Epaminondas lost his life at the battle of Mantinea, B. C. 362, where the Thebans were again triumphant, but the power of Sparta and Thebes were both broken.

(Q.) 107. Under whom did Macedon rise to eminence, and when; by what celebrated individual was he opposed; what battle sealed the fate of Greece? Date.

(A.) Under Philip II., B. C. 359. To strengthen his power he improved the discipline of his troops, and formed the celebrated Phalanx on the model of the Sacred Band of Thebes. He began by seizing Amphipolis and establishing the military station of Philippi; then choosing a time when the Athenians were embarrassed with a social war, which cost them the control of many islands, he intervened in the Sacred War, B. C. 357, between Thebes and Phœcis, which was brought to a conclusion after a struggle of ten years, principally by the intervention of Philip, who was rewarded by a seat in the Amphictyonic Council. Demosthenes in vain warned his countrymen against the ambitious designs of Philip, and exerting his military talents in defence of his country, compelled Philip to raise the siege of Byzantium. The sudden seizure of Elateia and Cytinion enabled the Greeks to see his real object, and brought about an alliance between Athens and Thebes; but it was too late, though the Greeks were successful in two battles, and Philip began to despair, but in the autumn of B. C. 338 the decisive battle of Chœroneia was fought, when the Macedonians, commanded by Philip and his son Alexander, and the experienced Antipater, gained a complete victory. While forming new projects for the conquest of Persia, at the head of the confederated army of Greece, Philip was assassinated at Aegæ, by Pausanias, B. C. 336.

(Q.) 108. Sketch the career of Alexander the Great.

(A.) At the age of 20 Alexander the Great succeeded his father Philip. Taking advantage of his youth, the Illyrians, Triballians and other barbarous tribes endeavored to recover their independence, but were defeated. Alexander then fell suddenly on Thebes, which had revolted, and massacred the Macedonian garrison, and organized an extensive revolution; the capital, Bœotia, was taken by assault, every house razed to the ground, the inhabitants put to the sword, and the women and children sold into slavery. Having thus effectually defeated every opposition, he resolved to carry out the projects of his father by the invasion of Asia. Leaving Antipater as regent in Macedonia, he crossed the Hellespont with an army of 37,000 men, and advanced to the Granicus, B. C. 334, where he defeated the Persian army which lined the banks of the stream, and who could not withstand the charge of the Phalanx, led by Alexander in person. All Asia west of Mount Taurus, the rich provinces of Phrygia, Lydia and Caria, the great cities of Ephesus, Sardis and Miletus, were compelled to submit to his authority as he advanced. The battle of Issus, B. C. 333, in which the Persian monarch, Darius Codomannus, commanded, soon followed, and terminated in the utter rout of the Persian host, Darius being compelled to flee, leaving his mother, wife and children in the power of the victor. Syria, with its capital, Damascus, Phœnicia and Sidon were speedily subjugated, but the reduction of Tyre cost him a seven months' siege. He then reduced Gaza and passed into Egypt, which surrendered without a blow, and there founded the great sea-port of Alexandria, which soon became the capital of the country, the depot of science, and the centre of the commerce of the Eastern World. He then proceeded eastward to Persia, marched rapidly through Syria, crossed the Euphrates at Thapsacus, thence through Mesopotamia, and thence struck down the Tigris, reaching the plain of Gangamela (twenty miles from the town of Arbela), where he found himself confronted by 600,000 men under Darius. The result was the same as at Issus; the first charge of the Macedonians could not be recovered, and after a brief conflict, the Persians were scattered, B. C. 331. From Arbela, the conqueror proceeded to Babylon and Susa (Shushan of Scripture), when the accumulated treasures of a long race of monarchs fell into his hands. Darius fled to Ecbatana, and thence towards the Caucasus, actively pursued by Alexander, but before he could be overtaken he was murdered by Bessus, Satrap of Bactria, who was shortly after taken, scourged and mutilated, B. C. 330. In becoming the sovereign of Asia, Alexander aimed at permanency of dominion, and with this view assumed the Median dress, married Roxana, a Persian lady of high rank, and in his internal polity contemplated the prosperity of his new empire. The foundation of other Alexandrias, still surviving in Herat and Candahar, followed, as the victor fought his way through Asia, past the Caspian to the Jaxartes. He then invaded Northern India, crossed the Indus at Attock, pushed on to the Hydaspes, which he crossed, and defeated Porus, B. C. 326. Having conquered India as far as the river Hyphasis, Alexander again returned to Susa, where Barsine, or Statira, the beautiful daughter of Darius, became his wife. Proceeding thence to Ecbatana, he offered magnificent sacrifices, followed by festive

gam. in gratitude for his long continued success. He then returned to Babylon, and while engaged in plans for improving his future capital and restoring the ancient Assyrian empire to its former supremacy, he was suddenly attacked by a fatal disease, of which he died, B. C. 323.

(Q.) 109. Give the particulars relative to the 1st, 2nd and 3rd Punic Wars.

(A.) The Mamertines, a mercenary body of Italian soldiers, had taken forcible possession of the city of Messana, B. C. 281. The Syracusans, under King Hiero, as well as the Carthaginians, attacked them, when the Mamertines solicited the assistance of Rome, which was granted B. C. 264, it being necessary to remove so powerful an enemy from the neighborhood of Magna Græcia, then recently conquered. The war ended after 23 years' duration. The reduction of Agrigentum was the first great exploit of the Romans, B. C. 262; then followed the first naval battle of Mylae, B. C. 260, in which the Consul Duillius defeated a nation long the mistress of the sea. Scipio expelled the Carthaginians from Corsica, while Regulus transferred the war from Sicily to Africa, where he was ultimately defeated and taken prisoner by the superior skill of Xantippus, a Spartan general who commanded the Carthaginians, B. C. 255. The war was then confined to Sicily, where, in B. C. 250, the Consul Cæcilius defeated the Carthaginians in a great battle at Panormus. At length the Roman victory of Ægusa reduced the Carthaginians to seek a peace, B. C. 241, which was granted on conditions, "that they should evacuate Sicily and the islands between it and Carthage, abstain from war against Hiero and his allies; restore all Roman prisoners without ransom, and pay 2,300 in ten yearly instalments."

The temple of Janus was now shut for the first time since the reign of Numa, B. C. 255, and in Sicily Rome made her first foreign conquest.

It was in Spain that the cause of the 2nd Punic War arose. A Carthaginian kingdom had been founded there by Hamilcar, father of the celebrated Hannibal; the latter having been elected to the command of the army in Spain, pushed the Carthaginian dominions up the Ebro, and captured the city of Saguntum, an ally of Rome, and in a short time completed the conquest of the peninsula. Rome then declared war, and Hannibal, adopting the policy of the Romans, resolved upon a daring movement to carry the war into the heart of the enemy's country by a march from Spain into Italy. Turning the eastern point of the Pyrenees, he crossed the Rhone, marched up its valley to the island of the Allobroges, north of the Isere, ascended that river to the valley of Chambery, and climbed over the Alps by the pass of St. Bernard. The march took about four months, and cost him 23,000 men, B. C. 218. Once in Italy he lost no time; with 30,000 men he defeated the Consul Scipio at the Ticinus; he next vanquished Sempronius at the Trebia, near Placentia, and in the spring of B. C. 217 he passed into the basin of the Arno, and routed the Romans in a fog by "reedy Trasimene," the Roman commander, the Consul C. Flaminius, being among the slain. A disaster worse than any yet undergone awaited the Roman army; on the bloody field of Cannæ, strewn with the golden rings of Roman knighthood, Hannibal won a signal victory, leaving 47,000 of the Romans dead on the field, B. C. 216. Marcellus inflicted the first check on Hannibal, near Nola, and shortly after he lost Capua and Tarentum B. C. 207. His

brother Hasdrubal marching to his assistance with 60,000 men was worsted and slain near the Metaurus, and Hannibal, after keeping possession of Italy for 15 years, during which time neither money nor assistance reached him from home, was recalled to Carthage to oppose the armies of Scipio, as the latter having driven the Carthaginian armies out of Spain, had transferred the Seat of War into Africa. The fate of Carthage was sealed at Zama B. C. 202, and Hannibal was defeated. Rigorous terms of peace were imposed on the vanquished city; all her foreign possessions were to be given up, her munitions and ships of war to be surrendered, a tribute of 10,000 talents to be paid in 50 years, and she was bound to engage in no war without the consent of Rome. Scipio returned in triumph and was henceforth distinguished by the surname of Africanus.

The 3rd Punic war originated in faction: Cato the Censor infatuated by a blind hatred of Carthage, which had rejected his proffered mediation between it and Masinissa, who was continually annoying the Carthaginians, and encroaching on their territory, and partly by fear of the growing power of Carthage, which had to some extent recovered its former prosperity during the 50 years that followed the conclusion of the 2nd Punic war, finished every speech that he made in the Senate with the words "Carthage est delenda." The disputes with Masinissa were made the pretext for hostilities, B. C. 149. The Carthaginians made some concessions, and when this was done, Rome further demanded, that Carthage should be razed to the ground, and that the inhabitants should build a new city for themselves in the interior. The Carthaginians resolved to perish rather than submit to such insolence.

During three years the devoted city held out, but at last Scipio Æmilianus gained entrance within its walls, B. C. 146, and for six days had to conquer every inch of ground, and in the end the Carthaginians set fire to the city and perished in the ruins. The city was more than twenty miles in circumference, and contained more than 700,000 inhabitants. Its wealth may be estimated by the plunder collected by Scipio, amounting to £1,500,000, he is also said to have sold 50,000 into slavery, who escaped from the carnage. It has been conjectured that Timbuctoo may have been founded by Carthaginians who escaped from the conflagration. Carthage, as a Roman province, became Lybia.

(Q.) 110. State the two most important provisions in the Licinian Rogations, and when the different offices of government were thrown open to the plebeians.

(A.) In the year 376 B. C., Licinius Stolo and L. Sextius were chosen tribunes, and brought forward a series of Bills, known as the Licinian Rogations. After a contest of ten years, the Rogations became law, B. C. 367; the two most important provisions were, 1st, that Consuls should be elected as formerly, but that one of them should always be a plebeian; 2nd, that no man should be allowed to occupy more than 500 jugera of the public lands. Lucius Sextius Lateranus was the first plebeian Consul, and the commons having once made good their claim to this high office, were not long before they participated in the others. They were admitted to the Dictatorship B. C. 359; the Censorship B. C. 351; the Prætorship B. C. 337, and to the sacred functions of Pontiff and Augur B. C. 300.

Miss McCutcheon's Trouble in Making up her Register.

BY QUID RIDES.

The ill success which attended Miss McCutcheon's strenuous efforts to impart to her pupils the rudiments of even elementary subjects seems to have not yet dispersed, but harasses her mind and goads her tender feelings. Miss McCutcheon is not subject to fits except when in a millinery shop, and then she openly acknowledges herself to be the most fitful person extant. It was not, however, we may add, laboring under the depression of a bonnet fit Miss McCutcheon was the other morning, when the evil spirit that haunted her school went out, and, bringing back three other spirits worse than itself, made the last state of her and the register worse than the first. There are a great number of registers, the most commonly known being the domicile register, which you can turn at will, but a heavy freighted school register will invariably turn you at will.

After pausing over the surface of her watch, Miss McCutcheon breathed mathematically upon her pupils, and turning her thoughts and her eyes simultaneously upon the school manuscript, proceeded to add. It was a heavy record to practice on—abstract and concrete numbers, addition, subtraction, multiplication and division theoretically and practically illustrated before her in the most extensive form. A heavy lead pencil adorned the ravine of her right ear, while a Bank of Montreal pen at intervals filtered ink on her fingers, thereby betraying her neatness and despatch.

But she clung on with a laudable tenacity to her work, discriminating the nines from the sixes, adding vigor to the work and figures to the paper, carrying over carefully to an authorized corner of the register each month's attendance, to form afterwards one grand total to be struck by an average.

Meantime the sixty hearts that beat as one began to appreciate the relaxation which the school census had extended to them. They didn't talk, but laughed in choruses, shot spit-balls at right angles, and considered it very monotonous if one of their number failed to keep his feet beating time on the floor. Eli Perkins took the lead, and was just measuring the massiveness and density of a small mound of paper with the calibre of his mouth, when a gentle tap at the door smoothly turned the attention of one hundred and twenty eyes towards that point, while Miss McCutcheon, at the unbiassed suggestion of Bill Nye, proceeded to open it. A slight calm ensued, and as the wonted aperture in the school disclosed the face of Jonathan Perkins, she politely saluted him.

"Are you the schoolmisses here?" inquired Perkins.

"Yes, sir," faltered Miss McCutcheon.

"I thought so," said Perkins, as he took her dimensions by an obtuse look of the left eye.

"Well," he continued, "you know Ned Perkins, my second son, has not been at school for a week back, and I can't account for it."

"I can," said Harvey Garnet, with a mischievous smile on his face; "people generally go to Dr. Bole's for weak backs."

The joke was perceptible, and the school convulsed; Perkins literally grinned, but virtually was in no conjunctive mood for mirth, and elevating his eyes around the room, descried Eli in a corner with a badly damaged eye, a memento of a previous evening's troublesome campaign.

"It's strange," resumed the angry parent, with an ugly flash of his eye, "that my boy can't be allowed to go home unmolested. When I was a boy," he added, "the teacher would raw-hdo us for such a villainous act as that," and he pointed to Eli, who meanwhile was displaying to its full advantage the uninjured eye to the utter discredit of the other.

"They're a very insubordinate class of boys, Mr. Perkins," said Miss McCutcheon; "I'm afraid they'll annihilate each other some evening yet."

"Eli is a good example, now, Miss McCutcheon," edged out Fred Watkins, "of the Passive Voice. Jim Wilburforce took him for his subject, and then connected him into an object, consequently, Eli, the subject of the Active Voice, became the object of the Passive Voice."

"You see, Mr. Perkins," rejoined Miss McCutcheon, in a grave and proud voice, "these boys are so replete with education that their knowledge will ooze out on every occasion, be it favorable or inopportune."

The dignity with which she marshalled this last sentence marshalled Perkins for his departure, and after having enveloped his head in a heavy fur cap and thoughtfully reminded her of Ned, he bowed egregiously and departed.

"Your dad's a fine old fellow," shouted Bill Nipe across the seats to Eli Perkins, who sat meditating on the beauties of a black eye.

But Miss McCutcheon was too intent on putting down nine and carrying six to notice the grand remark just passed.

A Suggestion.

To the Editor of the *Companion and Teacher*.

DEAR SIR, Allow me to make a suggestion through the medium of your journal with a view to improving the method of arranging the programme for the annual meeting of the Ontario Provincial Teachers' Association. The suggestion is this—Let the secretaries of the various local associations throughout the Province forward to me, at Newmarket, before Christmas, a list of subjects their associations deem suitable for discussion at the annual meeting. I will lay them before the "General Executive" at their Christmas meeting, when the programme is arranged. With this assistance, the committee will be able to present an improved programme to the teachers. Yours truly,

H. DICKENSON,

Sec. P. S., Sec. O. A. A. E.

Newmarket, Nov. 1st, 1876

An interesting meeting of the East Bruce Teachers' Association took place at Paisley on Friday and Saturday, 3rd and 4th ult., the Hon. Minister of Education being present. On the evening of the first day a public meeting was held in the Music Hall, the most prominent feature of which was the presenting by the teachers of an address of welcome to the hon. gentleman, and the delivering of a lengthy and deeply interesting reply, wherein he stated that:—

"No country in the world has made more material progress than the Province of Ontario, and in no department has greater progress been made than that of education. In Ontario a more favourable condition of things was found than in England, Germany, Scotland or Switzerland.

Selected.

"Teachers and the Art of Teaching."

Professor Tremblay delivered a lecture on the above subject, in the Y. M. C. A. Hall, Charlotte-town, P. E. I. — Rev. Donald McNeil, Secretary of the Board of Education, in the chair. The audience, though small, was select and appreciative, several of the city teachers being amongst those present. Mr. Tremblay is quite a master of English as well as French, and succeeded in keeping his audience interested in his subject until the very close.

After stating his intention of sojourning for a time in Charlottetown to teach the French language, and giving expression to some appropriate compliments in return for the generous, kindly reception he had met in this country, he went on to say that he had always believed, and still believed, that any conscientious and honest meaning man, seeking the patronage of the public, in whatever capacity it may be, has no right whatever to screen himself behind this one or that one. He did not believe in that kind of work; it is unmanly; it is ungentlemanly. He would rather see a man come out at once in his true colors, and stand upon his own work, if he has any to show, and upon nothing else. And he further believed that no teacher, however high or humble his position in society; no instructor of youth, however wide or small his sphere of labor, should be afraid to come out before the light and allow himself and his work to be tested by the sentiment of public opinion. That was his view of the matter. The proud city teacher; the unpretentious country schoolmaster; the humble schoolmistress, have each and every one of them a work of evangelization to perform, so to speak—that of leading to the moral and civil virtues the youth confided to their care. He considered that every teacher is endowed with a real ministry as a clergyman. Such being the case, let no teacher then having the conscientiousness of his own dignity, be afraid to step up boldly to the front, to produce his work, and to stand by it; for it is an infallible fact that people will judge of the tree by its fruit. This is the best recommendation that a teacher can carry with him at any time. He meant to carry no other, nor did he covet the carrying of any other, however glossy and pompous the piece of parchment may be.

He only wished that his fellow-workers in the honorable cause of Education would hoist up the same flag; that all his fellow-teachers would un-animously stand by that same principle, and from the moment that banner is unfurled to the breeze, no school will any more be pointed at as a disgrace; the standing of the teacher will at once be raised to its proper respectability, and the appellation of teacher shall no longer be a name of which any man will have reason to be ashamed, as associated with incompetency and want of tact.

With due deference to his fellow-teachers, and without wishing in any way to wound the feelings of any one, he said, at the outset, that when he spoke of teachers, he did not mean the host of beardless young men that he had seen, in less favored countries than possibly this little island is, turned out by the score every year from colleges, academies and training schools with a piece of paper in their hand, to prey upon the pockets of the illiterate, till a favorable opportunity would offer for them to shake

off an employment to which nature never intended they should be called, and for which they never meant to fit themselves in earnest. Those are the men who are found to be the stumbling block in the way of others; those are the men who, while perpetually complaining of the ungratefulness of the calling, have proved to be themselves the great drawback to the cause of education, and a hindrance to the rising of the moral standing of the teacher. He did not wish to insinuate that his remarks applied indiscriminately to all teachers, or that he placed them all on a level with the class referred to. No; he would make an honorable exception to the respectable phalanx of worthy, efficient, experienced and self-sacrificing teachers, many of whom are to be found in this city, perhaps, as well as elsewhere. This is the class of men by whom he stood, and in behalf of whom he spoke.

He said he was not an old man, but he had seen a great deal of the world; he had travelled a good deal. He had been in contact with many teachers in his days. He had watched them closely; he had studied them carefully, and from his own personal observations, as well as from having always had a leaning to the calling from his earliest infancy, he had arrived at these conclusions.—That the calling of the teacher is by all means a most deserving one, but unfortunately it has sadly degenerated, and does not seem to have kept pace with the spirit of progress and civilization of the age. The teacher, now-a-days, after spending the best part of his life in the service of society, is, when worn out, relegated to oblivion and forgetfulness. How many had he known, how many did he know, who have labored earnestly, faithfully, diligently, 20, 25, 30, 40 years in educating the youth of their country, and who to-day, unable to work any longer, would have a right to turn to their countrymen and say, like Socrates.—"We deserve to be fed, clothed and provided for the remainder of our days, in return for the services which we have rendered to our country." And yet, their country knows them not, and in their old age, where do we find those men? With a few solitary exceptions, sitting on the threshold of indigence, unknown and unnoticed, and they will likely go down to the grave unknown, and without a lament. A similar fate likely awaited him as it awaited many of his poor fellow-teachers. Let no one be discouraged. They had stood their ground too long to desert their post on account of the ungratefulness of those whom they had served. If the country would not erect them a monument, they would live in the memory of the ones whom they had benefited, and that itself was a sufficient reward.

But if teachers have to complain of the ungratefulness of the calling; if they are unappreciated as a body; ill remunerated, and therefore deprived of a social position in the world, where did the fault lay? Let us go to the primary source and trace it out. He considered that teaching, like preaching, is a calling which no one should enter unless he is called to it. Where then does the trouble lay? He said, in the teachers themselves. Too many enter the profession whose services are only calculated to sink the calling into contempt, and reflect discredit upon the whole fraternity. It would be no great loss to the country if they retired into the shade. They would not be missed. For teacher, in the real acceptance of the word, they are not, never were, nor never will be.

Although struggling by times with difficulties,

and having to cope with human injustice, the good, efficient teacher will always surgo above the waves; sooner or later he will find his proper level. He knew teachers in this city, he knew some in New Brunswick, in Nova Scotia, in Ontario, who had made for themselves an honorable competency; men highly spoken of, fully appreciated by a discriminating public. To what do they owe their standing? To themselves; to their work which is still standing, and to which they are not ashamed to point; for they carry with them the conviction that it will stand the test of public opinion. And public opinion has found it out to be so. These are the men who are a credit to the profession, whose names can be held up as a trophy. They owe their success, not so much to their learning, as to their vast experience, and their expertness in conveying instruction to others.

THE ART OF TEACHING.

There is a question of paramount importance which has, of late years, attracted the attention of leading geniuses, both in Europe and in America; and as it is a question of vital importance, he often wondered that politicians and men who had the leadership of public instruction, had not given the matter more serious consideration; that is, to find out the true line of demarcation between a man of learning, and a man capable of imparting his learning to others, or more properly speaking, the difference between an educated teacher, and a teacher capable of imparting his education to others. Well, he was no genius, nor politician, which he believed he found out, and he willingly gave the world the benefit of his discovery, free of charge.

Learning is acquired by study; but the art of teaching is only secured by practice and experience. No one would make him believe otherwise. They will tell us that there is a science called pedagogy, which teaches the Art of Teaching. That is all right enough; he knew something about that science. But let the young student, just out of a training school, experiment on the art, and he will soon realize the awkwardness of his position. He himself studied in college: he took out his degrees, and (should he say it), he carried off a respectable piece of paper in the teeth of thirteen sorrow-stricken, unsuccessful competitors. He immediately set to work to teach, or rather attempted to teach others all the fine things he had learned. Oh! what a fool he had made of himself! It was apparent to him that because he knew this, because he had studied that, there could be no trouble in teaching it to others. But in this he was mistaken. There was a wide gap between him and his pupils into which he could not see. That was his want of aptitude; his inability to impart what he knew to others. He had since been through another school, that is, the school of experience; and if there he had not added much to his former stock of learning, he had secured what had subsequently proved to be of great benefit to him and others—the art of imparting instruction. In the knowledge acquired at that school lies the secret of all our successful teachers. Go to them, and they will tell you whether he was right or wrong.

But there is another thing. The art of teaching, the art of communicating one's ideas to others, is a talent which is not given to everyone. Like music, poetry, and other fine arts, it may be cultivated, it may be improved, but it will never be in the man unless nature has imparted it to him. Learning will not impart faculties to a man, unless he has

been endowed with the same by his Maker. Hammer away as long as you will at a piano, you will never be a good player unless there is the genius of music in you. And so with drawing, painting, poetry, languages, and the art of teaching. When he came out of college, several of his fellow-students had previously shaken off the lust of the school, and had come out in the broad world, stuffed up to the throat with Latin and Greek, and very proud of themselves because they had a string of letters attached to their names. But blockheads he knew them to be; blockheads they have proved themselves to be; and blockheads they will die—time, as it rolled on, has not imparted brains to them.

Therefore, he would say to them, if you want to study anything, if you want your children properly and thoroughly educated, seek not the man with a vast amount of erudition and of no experience; trust not merely to parchment and outward appearances. But rather see, if among the crowd of teachers that claim your patronage, you can find one that combines both erudition and experience. Let his experience be the principal consideration. Certainly learning, and the more of it the better, is of some weight. But make yourselves sure, by testing the work, and not merely according to what others choose to say about it. In this, and this alone, lies the certainty of your success, and to a false interpretation of a teacher's merits may be attributed the failure, and the many disappointments of which you have had to complain of in the past.

To such of his fellow-teachers as might be here to-night, he would say before he closed.—Go on in your noble work of usefulness, regardless of the thorns that you occasionally find strewn over your path. Happier than he, they had their work with them. Stand by it, and fear nothing. Is your position what you would wish it to be? Rejoice, and thank God. Have you to contend with the ingratitude of your fellow-men? Be humble; be patient. The day will come when under the genial influence of the 19th century, teachers will rise to their normal position in society. In expectation of that happy day, let us give each other the frank accolade and amicable shaking of hands. Let not the weak envy the strong, nor the strong hate the weak. We are all engaged in a common cause, every one in his own sphere—education and instruction.

Mr. Tremblay next gave a lengthy account of his system of teaching French, which seemed satisfactory and interesting to the audience. The chairman and others made some complimentary remarks; a vote of thanks was then unanimously tendered to the learned lecturer, after which the proceedings terminated.—*New Era, Charlottetown, N.B.*

The More Excellent Way.

It is always a very difficult question for the teacher to settle, "How far shall I help the pupil, and how far shall the pupil be required to help himself?" The teaching of nature would seem to indicate that the pupil should be taught mainly to depend on his own resources. This, too, I think is the teaching of common sense. Whatever is learned should be so thoroughly learned that the next and higher step may be comparatively easy. And the teacher should always enquire, when he is about to dismiss one subject, whether the class understand it so well that they can go on to the

next. He may, indeed, give a word of suggestion during the preparation of a lesson, and by a seasonable hint save the scholar the needless loss of much time. But it is a very great evil if the pupils acquire the habit of running to the teacher as soon as a slight difficulty presents itself, to request him to remove it. Some teachers, when this happens, will send the scholar to his seat with a reproof perhaps, while others, with a mistaken kindness, will answer the question or solve the problem themselves, as the shortest way to get rid of it. Both these courses are, in general, wrong. The inquirer should never be frowned upon; this may discourage him. He should not be relieved from labor, as this will diminish his self reliance without enlightening him; for whatever is done for a scholar without his having studied closely upon it himself, makes but a feeble impression upon him, and is soon forgotten. The true way is, neither to discourage enquiry nor answer the question. Converse with the scholar a little as to the principles involved in the question; refer him to principles which he has before learned, or has now lost sight of; perhaps call his attention to some rule or explanation before given to the class; go just so far as to enlighten him a little, and put him on the scent, then leave him to achieve the victory himself. There is a great satisfaction in discovering a difficult thing for one's self, and the teacher does the scholar a lasting injury who takes this pleasure from him. The teacher should be simply suggestive, but should never take the glory of a victory from the scholar by doing his work for him, at least, not until he has given it a thorough trial himself.

The skill of the teacher, then, will be best manifested if he can contrive to awaken such a spirit in the pupil that he shall be very unwilling to be assisted; if he can kindle up such a zeal that the pupil will prefer to try again and again before he will consent that the teacher shall interpose. I shall never forget a class of boys, some fourteen or fifteen years of age, who in the study of algebra had imbibed this spirit. A difficult question had been before the class a day or two, when I suggested giving them some assistance. "Not to-day, sir," was the spontaneous exclamation of nearly every one. Nor shall I forget the expression that beamed from the countenance of one of them, when, elated with his success, he forgot the proprieties of the school and audibly exclaimed, "I've got it! I've got it!" It was a great day for him; he felt, as he never before had felt, his own might. Nor was it less gratifying to me to find that his fellows were still unwilling to know his method of solution. The next day a large number brought a solution of their own, each showing evidence of originality. A class that has once attained to a feeling like this will go on to educate themselves, when they shall have left the school and the living teacher.

As to the communication of knowledge, aside from that immediately connected with school studies, there is a more excellent way than that of pouring it in by the process already described.—*"Theory and Practice of Teaching,"* by David Perkins Page.

Hon. A. Crooks, Minister of Education in Ontario, says "Our school system should enable any youth of talent, no matter how poor or humble, to reach the highest intellectual and social position."

Parent and Teacher.

Had I children to send to school, I would keep them at home rather than send them to a teacher whom I esteemed unworthy my fullest confidence, both morally and intellectually.

One reason why an antagonism to teachers exists is that parents are naturally partial to their children, and are likely to consider them brighter and better than their neighbors'. If, then, their children do not make rapid progress in study, or if a neighbor's children outstrip their own, the teacher is at once pronounced wanting in zeal or skill, or else partial to said neighbor's children, when the fault lies wholly in the child's want of capacity or disposition to study. No teacher can supply brains or energy or order—he can only aid in the development of such talents as nature has bestowed.

Again, injustice is often done to teachers by parents detaining their children at home for the most trifling causes, so that, missing half the recitations or more, they are of necessity deprived of requisite discipline, become drags upon the class, and lose interest in study, because they meet with insuperable difficulties; and yet the teacher is censured because the children do not like their school, because they cannot understand his instructions, and because they do not make rapid progress in their studies.

Finally, the antagonism sometimes exists because parents, from a want of experience, cannot apprehend the difficulties of the teacher's position, or the exhausting characters of his labors. They can know nothing of the mental anxiety and thoughtful solicitude that exercise his mind day and night. Feeling that parents habitually under-rate his labors, the teacher naturally becomes hardened against them; for nothing more keenly touches an earnest man's sensibilities than to have his work under-estimated. That such an under-estimate of his difficulties and labors is prevalent, is painfully patent to every thoughtful observer. I have frequently been told that teachers have a very easy time of it; that no other class of workers devote so little time and labor to their occupation; that none engage in teaching but those who are too lazy to work. Such things have been said to me by a mother, who in the next breath would declare that the noise and trouble caused by her little family of five or six children was nearly worrying her to death. At the store or office I would probably be told the same thing by the *pater familias*, who had skulked off from home in the evening to avoid the trouble of managing his "little responsibilities." The bare idea of increasing their family to the number of from thirty to seventy would strike this father and mother with consternation. A sudden and unexpected clap of thunder could not more amaze and startle them. Yet the care and government of such a family is but part of the task they deem so easy for the teacher.

There is something peculiarly exhausting about taking charge of classes and giving instruction. Why this is so is, as yet, unexplained. Perhaps, when the philosophy of animal magnetism comes to be fully understood, the explanation will be found to lie in the fact that the very vitality of the teacher passes from him, as nerve force, and becomes stimulus, power, potential energy in the pupils before him. Preachers, after delivering two or three sermons on Sundays, complain of "blue Mondays;" but the true teacher performs work equally exhausting six hours per day, and five days

per week. It has passed into proverb that "teachers seldom grow old"—they die too soon. Could parents justly apprehend the difficulties of the teacher's position, all animosity would be overcome by charity, charity would melt into pity, pity would grow into sympathy, and sympathy would develop profound respect.—*Pa. School Journal.*

The Grievances of Public School Teachers.

Much has been done during the last few years towards elevating the profession of the public school teacher. The standard of qualification has been raised, and with it the remuneration for his services has in some small degree improved, although in too many instances it is yet a pittance. But it is to be regretted that no radical change has taken place in the way in which the public school teacher in the majority of rural districts is paid. It may not be generally known that it is the usual practice to pay the teacher no part of his salary until the close of the year, with the exception of the Government grants apportioned to each school. The salary itself is small, but how the teacher is expected to live during the year without a little money is rather a startling problem. That this state of affairs is a grievance requires but very little intelligence to comprehend it. Mechanics and other laborers find it necessary to have their earnings paid up every week, but the necessities of the teachers are thought to be maintained by a good character and a labor of love. True, it may be, the expenses of living in the country are not so great as in the town or city, yet the circumstances of a teacher must often be very humiliating and he must be debarred many privileges which would be of advantage to him in his work.

An improvement in this particular must very soon be effected, if any encouragement is to be held out to teachers to continue in the profession. As it is, it takes but two or three years to disgust the most aspiring and sensitive with the work, and they seek something more congenial to their tastes. The remedy is not difficult, and rests with the various boards of trustees throughout the country. And now is the time when an improvement can be made for the next year, when the school rates are to be levied and collected. Each school section should levy in addition to the amount required for this year, a sum to pay at least the first quarter's salary of the next year. The government grants might probably equal another quarter's payment, and for the third quarter a three months' interest would be but a mere trifle to the section; the fourth quarter would come with the general levy for the year. All it wants is a little consideration on the part of the people, and we are satisfied that Oxford will be ready to lead in a good example to the rest of the country. That every teacher in the country should be paid at least every three months is a demand that is justly claimed, and much good will result to the schools by such a system.—*Ingersoll Chronicle.*

Situations and Permanence.

Teachers are, as a body, young persons. They often lack the wisdom of experience.

A few of the lessons of common experience touch points of grave importance for them. For example, a teacher wishes a better situation. Perhaps he is really worthy of it. Let him seek it in all honor-

able ways; but we say to him, Until you have secured it, *hold on to the situation you have.* Mind the sailor's adage, "never let go one rope till you have hold of another." This is the soundest wisdom. Hold on to your place, and you are keeping up your practice; you are giving an opportunity for your work to speak in your favor; you are saving both time and money; you are showing a certain steadiness and patience which are in your favor. In fact, a quiet and faithful holding on to your situation till you have secured another, is one of the best recommendations to the other. Pursue the opposite course, and the very fact that you are out of a place has a look against you. It is a thing to be explained. The world is apt to think that the man out of place did not prove acceptable in place. Hold on, then. Anything is a better foothold than nothing. Something is the best foothold for something better.

Again, if you have anything approaching a permanence, do not let go of it, save for an assured permanence, or upon sheer compulsion. Once let go, it rarely comes again. Many things are against it. To have let it go, except on the first condition named, argues to the world either a discontented nature or an impracticable one. This is a dangerous obstacle in the way of a permanent re-establishment. Moreover, long continuance in any position, begets habitudes of thought and action, that are generally alive to the wants of the new ones. Unless the latter is professionally akin to the former, or is in its emoluments so much better, that that consideration prevails, you will be disappointed and discontented, and will seek relief in another change. With this begins drift. Such a conclusion is unhappy. A stable position after an opening career of drifting, is a promise of better things; but such a course of drifting, after a period of successful stability, is an augury of either demoralization or decay. Hence, if you have a permanence, *hold it fast and make it as good as you can.* The world is full of instances of melancholy struggle to gain a permanency, lost forever, because abandoned once.—*"School Bulletin," Wisconsin.*

Teachers Visiting the People.

The people like the friendly opportune visits of their teachers and preachers. They have an intuitive respect for high social conditions and intellectual attainments in others, although their circumstance, paternal neglect, or personal indifference prevents them from possessing these things themselves. It is a rest and recreation after talking all day to heedless children, to converse at evenings with the parents; it relieves us of that everlasting sameness that makes teaching irksome. Some will not visit because it is not a prescribed duty; but it is every man's duty to relieve himself, and no one can teach long without needing relief. Friendship is the main thing in a visit; but I would not say stay away for want of it: go without it, and acquaintance will make it.

"We dislike some people because we do not know them, and we shall never know them because we dislike them." This ancient adage proves that we change slowly for the better. If, then, we would have friendship, we must employ the means, viz.—visit. It is needless to await a cordial invitation, for there is sometimes more real welcome in rural silence than there is in city invitation. Give me the rough, hard grip of the hand of industry rather than the silken glove of shelly etiquette. Friend-

ship is an effect; acquaintance is its cause; and the effect can never precede the cause. Although we are gregarious, yet we are selfish creatures, and considerable self-denial, and something very closely akin to dissimulation, are at times needed to keep away a separation. The final interview is apt to be the severest on our speech, gait and garments; but to inspection we oppose circumstances.

We must remember that after all we are only theory men; farmers and mechanics are practical men, and therefore their opinions are important. Nor should we forget, that in order to have our own opinions respected, we must show deference for the opinions of others. We cannot show the school-master in correcting the errors or mistakes in the parents as we would in their children, but rather let them pass till their correction is clearly solicited. A teacher should be a kind of living cyclopaedia, reliable, and moderately ready to afford solicited information. He should study the children of the parents whom he means to visit, that he may be able to answer thoughtfully those questions which are commonly asked about their progress in school. One of the commonest and one of the worst replies a man can make, is one of those supine "Oh, first-rates." If we would have our opinion respected, we must not be afraid to tell sensible people what they already know is true.

Claims to the Discovery of America.

Probably no archaeological mystery is enshrouded with more interest and a greater charm than the discovery of the Western Continent. This fact is attested by the devotion and zeal of a galaxy of men of genius, such as Humboldt, Kingsborough, Stephens, Rafn, and well-nigh a score of others. The various theories for the solution of this perplexing problem, many of them ingeniously spun, are too numerous for mention here. Only the principal claims to the discovery and colonization can receive attention. Ancient America, with its noble monuments of a once grand civilization, is to us a land of darkness, and its history one of uncertainty. In our enquiries, fact must, in a measure, be exchanged for conjecture. Very scanty are the records that come down to us from the ancients concerning their knowledge of the Atlantic, and the islands hidden in its bosom, though those indomitable sailors, the Phœnicians, had passed the pillars of Hercules and established colonies on the western coast of Africa, in the ninth century before Christ. Three hundred years later (B. C. 576), according to Herodotus, Pharaoh Necho fitted out an expedition, manned by Phœnician sailors, and sent it around the entire coast of Africa. That the Canary Islands were discovered and colonized by the Phœnicians, there is no doubt. Strabo, speaking of the Islands of the Blessed, or Fortunate Isles, as they were afterwards called, adds, "That those who pointed out those things were the Phœnicians, who before the time of Homer had possession of the best part of Africa and Spain." It is a well known fact that these hardy adventurers of the seas were in the habit of preserving with the strictest secrecy the names and location of the distant lands with which they engaged in commerce. Where they sailed and traded, other than in the ports of the Indies and of the British Isles, must remain unknown. Whether furnished by this nation of sailors or not, the ancients seemed to have had some remarkable information concerning an island

or continent hidden in the Sea of Darkness, as the Atlantic was called. The first mention of this is made by Theophrastus, a celebrated Greek orator and historian, who flourished in the time of Alexander the Great. His description of this distant island, of great dimensions, and inhabited by a strange people, is preserved in Ælian's "Variorum Historiarum," written during the reign of Alexander Severus.—*The Galaxy.*

The Student and the Teacher.

"He is well liked by his students, and you would have me believe that this is the only important requirement to the success of his administration," remarked a gentleman to whom we were describing the success and prosperity of a distinguished teacher not long since.

"Yes, sir," was our answer, "he is well liked by his students, and however lightly you may regard this fact, we would have you to understand that next to the learning of a professor comes his ability and disposition to gain the good will of his students."

The modern professor who ignores the wishes of his students and haughtily refuses to respect either their opinions or their feelings, is the professor who is gradually losing his grasp on his position. The older heads now frequently ask their sons and daughters how they like their teachers, and on the answer depends considerable. We do not intend by this to convey the idea that a teacher or professor must lose his firmness, his dignity, or his courage to conduct his school in accordance with his ideas, but we do hold that he should in a certain degree respect the wishes and sentiments of his students. This may call to mind the case of the boy who quit school because his teacher was "too sassy," and we would not be surprised if some superannuated pedagogue should tell us tartly that students are sent to school to obey and learn, not to command. This is true; we would not expect a student to exercise any such power, but students collectively can exert a powerful influence over the ones who do command, and any teacher or professor who underrates this power of students certainly makes a miscalculation.—"*High School,*" Omaha.

Faults.

He who boasts of being perfect, says a modern writer, is perfect in his folly. I have been a great deal up and down in the world, and I never did see either a perfect horse or a perfect man, and I never shall until I see two Sundays come together. You cannot get white flour out of a coal sack, nor perfection out of human nature; he who looks for it had better look for sugar in the sea. The old saying is, "lifeless, faultless." Of dead men we should say nothing but good; but as for the living, they are all tarred more or less with the black brush, and half an eye can see it. Every head has a soft place in it, and every heart has its black drops. Every rose has its prickles, and every day its night. Even the sun shows spots, and the skies are darkened with clouds. Nobody is so wise but he has folly enough to stock a stall at Vanity Fair. Where I could not see the fool's cap, I have, nevertheless, heard the bells jingle. As there is no sunshine without shadows, so all human good is mixed up with more or less of evil; even poor-law guardians have their little failings, and

parish beadies are not wholly of a heavenly nature. The best wine has its lees. All men's faults are not written on their foreheads, and it is quite as well they are not, or hats would need wide brims; yet as sure as eggs are eggs, faults of some kind nestle in every man's bosom. There's no telling when a man's faults will show themselves, for hares pop out of a ditch just when you are not looking for them. A horse that is weak in the knees may not stumble for a mile or two, but it is in him; and the rider had better hold him up well.

The tabby cat is not lapping milk just now, but leave the dairy door open and we will see if she is not as bad a thief as the kitten. There's fire in the flint, cool as it looks; wait till the steels get a knock at it, and you will see. Everybody can read that riddle; but it is not everybody that will remember to keep his gunpowder out of the way of the candle.—*Proof-Sheet.*

Autumn Leaves.

The waving golden grain I oft have seen,
And oftener still admired the vernal green;
But who that loves green fields or golden sheaves,
Is not enraptured quite with autumn leaves?
Wild flowers of spring, with cups of azure blue,
And violets I hail with pleasure, too;
And pinks and roses of the summer time,
And flowers exotic from each foreign clime.
But when the garden flowers have mostly fled,
And stems are bare and leaves are sear and dead,
God breathes on nature with a frosted breath,
And robes the verdure for its coming death.
What gorgeous vestments! never since its birth
So grand as when returning back to earth;
'Twould seem as if by magic wand or word
A rainbow's tints to leaves had been transferred;
And every leaf, while bathed in morning dew,
Had deeply drunk of its own chosen hue;
And all the hillside circling round the glade,
In queenly robes of choicest tints arrayed.
The lowly sumachs fringe the grassy plain
With robe of purple; next a darker stain—
A brownish gray—the hazel's sober suit,
And then the maple, higher in repute,
With many colors, like a robe of old,
In purple, pink, and red, and green, and gold.
Next, poplar, yellow—seeming half undressed,
As if impatient for its winter's rest;
And pines and balsams, with their changeless green,
Like staid old matrons, here and there were seen,
Silent reminders in this changeful clime
Of things outlasting all the blasts of time.
A scene unequalled, where no frosts descend,
And verdure fades, but never has an end.
This moral nature deigning to unfold:
When frosts of time come as we're growing old,
We should array us in our best attire,
Like leaves of autumn just ere they expire;
In spotless garments, purged from sinful stain,
In hope that dying we shall rise again—
To bloom immortal, cherished beyond price,
Transplanted safe in God's own paradise.

J. F. LATIMER.

—Ontario Free-Mason.

The teaching staff of Ontario is about 5,000.

About \$3,000,000 are spent annually on our schools in Ontario Province. Do we get good return for our money?

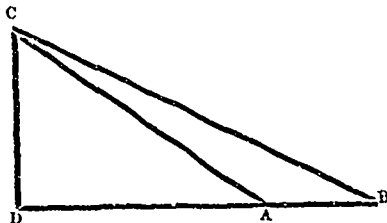
Mathematical Department.

SAMUEL R. BROWN, EDITOR, Box 67 D, LONDON.

Teachers and others are invited to forward any problems they may think worthy of a place in these columns, provided always that the solutions accompany the problems. Send Solutions before 15th, to receive attention.

Solutions.

No. 21,—



Let A be the station from which the two engines start. In six hours one engine arrives at B and the other at C; then BC is the distance they are apart. AB=120 miles; AC=210 miles. From C draw the perpendicular CD to BA produced. The angle DAC is half a right-angle, therefore the angle DCA is half a right angle; hence AD=DC.

$$AD \text{ or } DC = \sqrt{\frac{AC^2}{2}} = \sqrt{22050}$$

$$BC^2 = BD^2 + CD^2 = AD^2 + AB^2 + 2AD \cdot AB + CD^2$$

$$\therefore BC^2 = 14400 + 44100 + 240\sqrt{22050}$$

$$\therefore BC = \sqrt{58500 + 240\sqrt{22050}} = 306.8 \text{ miles.}$$

No. 22.—

Perform the multiplication indicated, and then add the three equations together, and divide their sum by 2.

$$xy + xz + yz = 26 \quad (4)$$

Eq. (4) - eq. (1) gives $yz = 12 \quad (5)$
 " (4) - " (2) " $xz = 8 \quad (6)$
 " (4) - " (3) " $xy = 6 \quad (7)$
 " (5) x " (6) x eq. (7) gives $x^2 y^2 z^2 = 576 \quad (8)$
 Extract the square root of (8) $xyz = 24 \quad (9)$
 Eq. (9) divided by eq. (5) gives $x = 2$
 " (9) " " (6) " $y = 3$
 " (9) " " (7) " $z = 4$

No. 23.—

Let M and m be the bodies, and V and v their respective velocities, and vel the velocity of the united mass after impact:—

Then $(M - m) \times vel = M \times V - m \times v$, and hence

$$vel = \frac{M \times V - m \times v}{M + m}$$

$$vel = \frac{(130 \times 50) - (85 \times 90)}{130 + 85} = 51\frac{1}{2} \text{ feet per second.}$$

$(130 + 85) \times 51\frac{1}{2} = 1150$ momentum after impact; and since 85×90 , the momentum of the body moving to the west is greater than 130×50 , the momentum of the body moving to the east, the united mass moves to the west.

No. 24.—By J. G. Hands, Jones' Commercial College, London, Ont.

Let x = the number,
y = one of the parts,

Then $x - y =$ the other part.
 $y^2 + (x - y) = (x - y)^2 + y$
 $y^2 + x - y = x^2 - 2xy + y^2 + y$
 $x - 2y = x^2 - 2xy + x(x - 2y)$
 $\therefore x = 1.$

No. 25.—By John Anderson, Severn Bridge, Ont.
 Let $x =$ no. of a pieces, and $y =$ no. of b pieces.
 Then $x + y = c$, (1)

From eq. (1) $y = c - x$, and $\frac{x}{a} + \frac{y}{b} = 1$, or $bx + ay = ab$.

By substitution, $bx + a(c - x) = ab \therefore bx + ac + ax = ab$, or $ax - bx = ac - ab \therefore x = \frac{a(c - b)}{a - b}$; now, by substituting the value of x in eq. (1) we get $b(c - y) + ay = ab$, or $bc - by + ay = ab$, $y(a - b) = ab - bc \therefore y = \frac{b(a - c)}{a - b}$

CORRECT SOLUTIONS have been received as follows:—

Nos. 17, 18, 19, John R. Brown, Sylvan, Ont.
 Nos. 17, 19, — Nannird, Elmvilleville, Ont. (These two should have appeared in November No.)

No. 23.—Thos. Hammond, Selkirk, Ont.
 Nos. 21, 22, 24, 25, James Millar, Grimsby, Ont.
 Alex. Dickie, Toronto, Ont.

Nos. 21, 23, J. F. Aitken, Warwick, Ont.; Miss M. K., London, Ont.

21, 22, 25, Thomas Worlen, Cromarty, Ont.
 Nos. 22, 23, 24, 25, A. B., Blanshard, Ont.; J. Ferguson, Lobo, Ont.; Frauk Hausel, Smithville, Ont.

Nos. 21, 22, 23, 24, 25, John Anderson, Severn Bridge, Ont.; J. G. H., Jones' Commercial College, London, Ont.; W. O., London, Ont.; X. Y. Z., Lucan, Ont.; John Johnston, Wanstead, Ont.; James W. Morgan, St. Helens, Ont.; Thristram Chislitt, Walkerton, Ont.; Wm. Johnston, Watford; Duncan McEachren, Ashgrove.

No. 21, G. W. Mariott, Jura, Ont.
 Nos. 21, 23, 24, 25, R. M. White, Northport, Ont.; Theophilus Hall, Markdale.

No. 25, R. M. Pascoe, Bowmanville, Ont.
 No. 22, R. Acton, Ashton, Ont.

Nos. 23, 24, 25, A. S. McGregor, Avonbank, Ont.

NOTE.—Teachers in sending solutions will please send each month's problems separately.

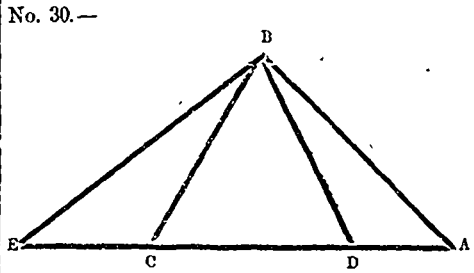
No. 26.—
 A man bought a horse, a buggy and harness; the harness cost $\frac{25}{100}$ the buggy cost as much as the harness $+\frac{7}{100}$ of the cost of the horse, and the horse cost as much as the buggy and harness both.—What was the cost of all? *By arithmetic.*

Problems.

No. 27.—
 A farmer bought two flocks of sheep; the first at \$4 each, and the second, which contained 20 more than the first, at \$6 each. If he sold them all at \$5 each, and gained \$30 on the whole transaction, how many sheep were in each flock? *By arithmetic.*

No. 28.—
 $x^2 = \sqrt{x^2 - 1} + \sqrt{x^4 - 1}$. Find x .

No. 29.—
 To what depth may an empty closed glass vessel, just capable of sustaining a pressure of 170 lbs to the square inch, be sunk in water before it breaks?



No. 30.—
 ABC and DBE are right-angled triangles; $AB=40$, $BE=50$, and $DC=30$. Find BD and BC .

No. 31.—
 A farmer has two square fields, a side of one of which is 10 rods longer than a side of the other, and the area of the latter is $\frac{2}{3}$ of that of the former. Find the side of each.

No. 32.—
 A municipality borrows for improvements \$1500, to be paid back with interest at five per cent per annum, in ten equal annual instalments. How much must be paid at the end of each year, so that the debt may be cancelled in the ten years?

No. 33.—
 Given $\begin{cases} y^2 - 432 = 12xy^2 \\ y^2 = 12 + 2xy \end{cases}$ To find the values of x and y .

No. 34.—
 A person bought a number of apples and pears, amounting together to 80. Now, the apples cost twice as much as the pears; but had he bought as many apples as he did pears, and as many pears as he did apples, his apples would have cost 10 cents, and his pears 45 cents. How many did he buy of each?

No. 35.—
 $x^4 + ax^3 + bx^2 + amx + m^2 = 0$. Find the values of x .

[Nos. 26, 27, 28, 29 and 30 of the above problems appeared in the November No. of the COMPANION, and the solutions will appear in our next issue. The solutions of Nos. 31, 32, 33, 34 and 35 will be given in the January No. The names of those who solve the several problems correctly will be published with the solutions thereof.—Ed.]

Curiosities of Mathematics.

Card players who are continually bewailing their ill luck of always receiving the same poor cards will, perhaps, be assured by knowing that the fifty-two cards, with thirteen to each of the four players, can be distributed in 53,644,737,756,488,792,539,237,440,000 different ways, so that there would still be a good stock of combinations to draw from even if a man from Adam's time had devoted himself to no other occupation than that of playing at cards.

When King Stanislaus of Poland, then a young man, came back from a journey, the whole Lescin-

...kian House gathered together at Lissa to receive
 num. The master of the school, Jablowsky, pre-
 pared a school festival in commemoration of the
 joyous event, and had it end with a ballet
 performed by 14 students, dressed as young caval-
 iers. Each had a shield, upon which one of the
 letters of the words "Domus Lescinia" (The Les-
 cinskian House) was written in gold. After the
 first dances they stood in such a manner that their
 shields read "Domus Lescinia;" after the second
 dance they changed the order, making it read
 "Ades incolumnus," (Unharm'd art thou here!)
 after the third, "Mane sidus loci," (Continue to be
 a star for the country); after the fourth, "Sis
 columna Dei," (Be a pillar of God); and finally,
 "I! seande solium!" (Go, and ascend thy throne!)
 Indeed these two words allow of 1,556,755,200
 transpositions, yet that four of them contain inde-
 pendent meanings is certainly very curious.

If one cent was set out at compound interest in the
 year 1, at four per cent., on the first of January,
 1666, it would amount to 1 quintillion, 201,458
 quadrillions, 332,000 trillions of dollars. If we
 were to take this sum as a capital, and would use
 a yearly interest (four per cent.), then the in-
 come tax we should have to pay at the rate of one
 per cent. would be 480 quadrillions, 583,320 tril-
 lions of dollars. If we paid the tax collector this
 sum in silver he would need 3,003,645,000,000,
 0,000,000 wagons for its transportation. Pro-
 ceed the whole earth's surface, both land and
 water, were peopled as closely as possible, we
 could have but 1,200,000 part of the drivers
 required, and the line of wagons would have the
 length of 8 trillions, 442,000 billions of miles.

The speed of light, as mentioned, is 192,000
 miles per second, and it would take 743,600 years
 to reach the collector, beginning at the furthest
 wagon, if he, to have better control over the
 wagons on both sides, stationed himself in the
 centre of the line. Again, a robbery could be
 committed on the hindermost wagon which would
 not be discovered till the 24,780 generation of tax
 collectors. If, on the contrary, instead of using
 compound interest of the capital—the bulk of which, by
 the way, in gold, would be equal to 44 globes—
 the capital were distributed among the people
 of the earth, each one of its 1,000,000,000 of inhabi-
 tants would receive about 1,200 trillions of dollars
 to live on, and could every second use \$2,000,000
 for 38,096,000 years without reaching the bottom
 of his purse.

Examine the above, and see if it is correct!

To tell the Day of the Week.

Mr. Gilmour C. George, of San Rafael, Cal., sends
 the *San Francisco Call* a method of telling the day
 of the week any given day of the month fell, or falls
 in this or the last century. We have tested it
 in numerous instances, in each of which it proves
 fallible. Mr. George says:

I submit the following mode by which any person
 can tell the day of the week for the last and present
 century, for the information of your numerous
 readers. I will take up as little space as possible,
 and perhaps you can still curtail it:

CENTENNIAL RATIOS.

For 1700, the ratio is 2; for 1800, the ratio is 0.

MONTHLY RATIOS.

First month is 3; second month is 6; third month
 is 9; fourth month is 2; fifth month is 4; sixth

month is 0; seven month is 2; eighth month is 5;
 ninth month is 1; tenth month is 3; eleventh
 month is 6; twelfth month is 1.

In Leap Year, the ratio in January is 2; and in
 February 5; the other months remain the same.

EXPLANATION.—To the given year add its fourth
 part, rejecting fractions; to this add the day of the
 month, the ratio of the century and the ratio of
 the month; divide the sum total by 7, and the re-
 mainder is the day of the week—counting Sunday
 1, Monday 2, etc. Of course, Saturday being the
 seventh day the remainder will be a cipher.

EXAMPLE.

What day of the week was July 4th, 1776?
 To the given year, which is 76
 Add its fourth part, rejecting fractions..... 18
 Add day of the month..... 4
 Add ratio of the century..... 2
 Add ratio of month..... 2
 Divide by 7..... 103

14 5
 We have 5 remainder, or fifth day of the week—
 Thursday.

Estimating Amount of Land in Fields.

To aid farmers in arriving at accuracy in estima-
 ting the amount of land in different fields under
 cultivation, the following table is given:—

5 yards wide by 968 long	contain one acre.
10 " " " 484 " " " "	" " " "
20 " " " 242 " " " "	" " " "
40 " " " 121 " " " "	" " " "
80 " " " 60½ " " " "	" " " "
70 " " " 69½ " " " "	" " " "
60 feet " " " 726 " " " "	" " " "
110 " " " 369 " " " "	" " " "
120 " " " 363 " " " "	" " " "
220 " " " 198 " " " "	" " " "
240 " " " 99 " " " "	" " " "
440 " " " 99 " " " "	" " " "
A box 24x16 inches deep	contains one barrel.
" 16x10½ " 8 " " "	" bushel.
" 8½x7 " 8 " " "	" peck.
" 4x2½ " 4½ " " "	" ½-peck

THE FIFTEEN-YOUNG-LADY PROBLEM.—The Lon-
 don Mathematical Society lately occupied itself
 with a discussion of the following problem: "In a
 school of fifteen girls a rule has been laid down that
 they shall walk out every day in rows of threes, but
 that the same two girls shall never come together
 twice in the same row." The rule is supposed to
 have been carried out correctly during the six-
 working days of the week, but when Sunday comes
 it is found impossible to send the girls to church
 without breaking the rule." This problem was
 announced more than a quarter of a century ago,
 and has engaged the attention of distinguished
 mathematicians, for the reason that its solution in-
 volves the use of mathematical synthesis. Prof.
 Sylvester's paper, in which the subject was discussed,
 was "on the fifteen-young-ladies problem and a
 general mathematical theory of pure syntax."—
"Scientific Miscellany," in the Galaxy.

Euclid was a mathematician of Alexandria, who
 flourished 300 years before the Christian era. He
 distinguished himself by his writings on music and
 geometry, particularly by his fifteen books on the

lements of mathematics, which consisted of problems and theorems, with demonstrations. Much of this valuable work has been lost; the first six books and fragments of the subsequent ones still remain, and serve as the basis of all text-books on geometry. Euclid established a famous school of mathematics at Alexandria. Among his pupils he numbered King Ptolemy, to whom, when questioned by the monarch, if there was no easier way of mastering mathematical truths, he gave the famous reply:—"No, sire; there is no royal road to geometry." He is said to have been of an amiable disposition, and free from jealousy of his rivals.

A correspondent sends us the following.—You would confer a favor by sending me a solution to this problem: There is a bowl in the form of the segment of an oblong spheroid whose axis are to each other in the ratio of 3 to 4. The depth of the bowl one fourth of the whole transverse axis, and the diameter of the top 20 inches. How many glasses each will a company of 10 persons have in it when filled with wine? They use a conical glass, whose depth is two inches, and diameter of its top (brim) an inch and a half. Faithfully yours,
A. B., Toronto, Ont.

[Correspondents will please read the note at the head of this Department. We will send solutions only through the COMPANION AND TEACHER. As the above is a good problem, we will give its solution in a future No.—EDITOR.]

On account of our haste in going to press this month, No. 26 appears over "Problems" instead of under, on page 48, first form, now worked off.

Educational Intelligence.

The last regular meeting of the Madoc Teachers' Association was held on Sept. 30th.

Before the discussion of the programme was entered upon, the President made some remarks suggested by a recent visit to the schools of Philadelphia, and an inspection of the educational exhibits made by several States of the Union at the Centennial. The liberality of the Philadelphia people in educational matters was characterized as unsurpassed. The teachers are well paid; the school-houses commodious, conveniently arranged on the whole, and supplied with every necessary appliance.

In the Primary, Secondary, and Grammar Schools (the three corresponding to our different grades of Public Schools,) the government and discipline were excellent. Mutual confidence and affection evidently existed between teachers and pupils. Notwithstanding these and other pleasing features, Mr. Mackintosh had no hesitation in saying that in the qualification of its teachers, in the educative value and thoroughness of the work done in its schools,—in short, in everything that distinguishes really good schools from those in which the work done is but showy and superficial for the most part—mere educational veneering—the schools of Ontario excel those of the United States. Although more than ten times more populous than Toronto, the "Quaker City" has no Public School which even approximates in excellence, to the Ontario Model School, at Toronto.

In concluding his remarks, Mr. Mackintosh paid a high compliment to the teachers connected with the Philadelphia Teachers' Institute for their un-

bounded kindness and courtesy. In these qualities they cannot be excelled.

A general discussion on "Irregular Attendance: its Causes and Cure" then took place. Animated as well sustained, this was a very interesting part of the proceedings. At the close of the discussion opinions elicited were summed up by the President, who made an earnest appeal to the teachers to perform every effort in their power to check an evil rampant in its influence in our schools.

As to the means to be adopted for lessening the evil, the use of prizes, a proper system of keeping class registers, visiting parents, etc., were recommended. The opinions expressed may be summarized as follows: Everything that tends to make school cheerful, and the instruction given in it valuable, will diminish irregular attendance. Teachers prepare, in the most thorough manner, each day's work; let the hours of opening and closing be rigidly adhered to; let teachers themselves be models of regular attendance and punctuality; let order and system obtain in everything. In short, let teachers prove to pupils and parents by their cheerfulness, energy, thorough preparation, orderly habits and unflinching enthusiasm, that they are devoted to their work,—that their hearts are it—that the prosperity of their schools occupies the most prominent place in their minds, and irregular attendance will, gradually it may be, but certainly decrease.

Trustees can do much to aid in this work. School-houses can be made more comfortable. With dirt rarely washed, untidy and uncomfortably-seated school-rooms, irregular attendance is not to be wondered at. Make the school-house and its surroundings tasty and homelike; make the out-houses something different from the disgraceful pens many of them are, and more children will love attending school.

COUNTY BY-LAW TO ANNEX TO A SECTION PORTION OF THE TOWNSHIP WHERE THERE IS NO SCHOOL.—The County Judge of the County of Norfolk has given judgment in a school case which possesses both interest and importance. The Municipal Council of the Township of Walsingham passed a by-law attaching Long Point on Lake Erie to one of the existing school sections of the township. The Long Point Company refused to pay their school tax, and the section entered an action to recover the amount. It was admitted by the plaintiff's counsel that the part of Long Point nearest to Port Rowan, the site of the school, is distant four miles, communication being by water, and that the part furthest off is twenty-five miles. The by-law was declared by the Judge to be *ultra vires* of the Council, and contrary to the intention and reasonable interpretation of the School Acts. The by-law was held to be beyond the competence of the Council to pass, because, although the School Law confers upon township councils the right to form into school sections portions of a township where no schools have been established, and to unite two or more sections into one at the request of a majority of the assessed freeholders and householders, it nowhere authorizes a council to annex a portion of the township where there is no school to another portion where there is one. It was further held that the manifest intent of the school law is to bring the means of obtaining education within the reach of all, and that the by-law itself contains provisions guarding against the creation of insurmountable physical obstacles to the attendance of the children of the section

This intention was completely frustrated by the by-law in question, the great distance between the Point and the mainland being of itself sufficient to preclude attendance at Port Rowan school. A verdict was, therefore, entered for the defendants, with costs.

Resolutions passed by the Grenville Teachers' Association, on the 7th Oct., 1876:—

Inasmuch as skill and experience are regarded as indispensable requisites to success in almost all callings and professions; therefore, be it resolved,

1st. That the security of our country and the highest interests of society demand that those who are entrusted with the education of the rising generation should be thoroughly instructed in the theory of education, and trained in the most successful and approved methods of imparting instruction, before they are authorized to assume so important a position.

2nd. That our Normal Schools, as now constituted and conducted, do not give the time and attention to this subject which its importance demands.

3rd. Teachers' Institutes, if properly conducted, would be very beneficial in giving some training to teachers generally, but more especially to those who have not had the advantage of any previous training.

4th. That these resolutions be submitted to the Hon. A. Crooks, Minister of Education, as the expressed opinion of the Grenville Teachers' Association.

Resolutions adopted at a meeting of the Educational Association of the County of Dundas, held at Morrisburgh, September 8th, 1876:—

1st. That it is the opinion of this Association there should be two grades of Third Class Certificates, grade A and B.

2nd. That the subjects of Examination for Third Class, grade B, remain as at present.

3rd. That for Third Class, grade A, teachers be examined in the subjects already laid down for Third Class, and also in Algebra to end of simple equations, Euclid Book I., and Book keeping.

4th. That for each grade of Certificate a minimum of 60 per cent. be required in the subjects of Arithmetic and Grammar.

5th. That each grade of Certificate be valid for two years.

6th. That each grade of Certificate may be renewed if the candidate obtain sixty-six per cent. of the total number of marks, and also sixty-six per cent. of the number of marks assigned to the subjects of Arithmetic and Grammar, and that renewed certificates should be so marked.

The most successful Teachers' Institute ever held in North Essex was that which closed its session at Sandwich on the evening of Friday, Nov. 3rd. owing to the energy of Inspector Girardol, nearly all the teachers of his inspectorate were present. The programme consisted of a lecture on "French Grammar and Orthography," by Mr. Girard, of the Point; "How to Teach Arithmetic to Beginners," by Mr. Pringle Shaw; an essay on the influence of the public school upon modern civilization," by Miss Armstrong, of Maidstone; "Writing," by Mr. Eli Benitean; a paper on "History," by Mr. Barr, of Windsor; "Grammar," by Mr. Morrison, of Maidstone; "How to teach Reading," by Mr. Ashdown, of Sandwich. Mr. Duncan read

an essay upon the question "Is the education of our public schools as practical as it ought to be?" Mr. Ashdown, of Sandwich, read a very fine essay on the subject of "The Teachers' Library." Mr. McHugh, of Maidstone, introduced the subject of "Object Lessons." Mr. Albert Boudy, of Sandwich West, gave an eloquent address upon "The relations of teachers, pupils and parents." Mr. Girardot read an address to the Hon. Adam Crooks, after which came Mr. Crooks' speech, in which he again showed the deep interest he is taking in the matter of education throughout all parts of this province. The convention was a complete success.

In Lower Canada to-day we have a body of teachers of all grades, of which we ought to be proud, and which forms a solid basis for any forecast of the population which is hereafter to possess the land. For, as the teachers are, so will be the people. It is often complained that the teacher's profession is not regarded with that respect which is due to it, and, indeed, there is some reason for the complaint. Those who devote their lives to the forming of the minds of a growing people ought to hold a rank in the popular affection and esteem second to none. On them it depends how the places which we now fill will be filled hereafter—whether the land which we love will be a land of knaves, of sluggards, of rous, or a land of honest, industrious, noble men, doing their duty to God and to their fellows. The teacher, therefore, ought to have the sympathy and the support of the whole community. Especially ought parents, as far as lies in their power, to co-operate with him in his efforts to arouse the intellectual and moral energies of the young people committed to his care. They ought, instead of making difficulties, or adding to those already made, to exert themselves, wherever possible, to smooth them away. And in how many ways they can do so, if they only take the trouble!—*Montreal Gazette.*

At the County of Haldimand Teachers Convention held at Cayuga, on the 30th ult., Dr. King, Principal of the Caledonia High School, delivered an able, impressive and eloquent address. He pointed out the very great benefits and advantages which are derivable to teachers from their connection with such Conventions. He said education had for its object the development of the moral and intellectual capacities, he showed how it served to expand the minds of the young, to awaken and cherish a love for the beautiful and good, to elevate them in the scale of being, and eventually to fit them to discharge all the duties of life and enable them adequately to appreciate and faithfully to improve their highest possible degree to their happiness and well-being hereafter. He also said that the strength and prosperity of a nation depend on a well-educated community, and that there was nothing which proves so much the progress that a people are making in intelligence, wealth and in everything that contribute to their social, moral and political greatness, as the attention which they devote to a higher standard of education in the public schools, and the erection of neat and substantial school edifices.

The people of Port Hope have undertaken to instruct their School Board in matters pertaining to the organization and conduct of their town schools. A petition signed by 300 of the ratepayers, was presented at the last meeting of the Board, praying for a reduction in the school expenditure, the extension of the school day to at least

six hours, and curtailment of the vacations to the legal limit; a reduction in the size of the junior, and an increase in that of the senior classes; the abolition of the fifth and sixth classes of the Public School, and the translation of the pupils composing them to the High School, so that they may bring in a larger grant, that the teachers of the higher grades may have subjects allotted to them instead of classics, and that the number of higher salaried teachers may at once be lessened as far as the new classification may permit. The petition was referred to a Committee of the Board, with instructions to report at next meeting.

The opening article in *The Canadian Mechanic's Magazine and Patent Office Record*, on Public Schools, among other things says:—"Another source of complaint by parents is the injustice of keeping a whole class in, after school hours, as a punishment for the undiscovered guilty one, because none of the children would be mean enough in spirit to point out the child, and have it punished, for what? perhaps, after all, some trifling infringement of school discipline. As it is, the hours for children in many of our public schools are already too long, particularly for girls residing in towns. Of what use is education without health and life to enjoy it? and certainly the hours of our town schools are too long. When a girl is kept in the close confinement of an over-crowded room, from nine in the morning till half past three, and even four o'clock, in the afternoon, particularly in the winter, what time has that child for exercise? the afternoon is closed for out-door recreation and household duties, and evening studies close the day. No wonder so many of our girls grow up unfit for the domestic duties of life."

IMPORTANT DECISION ON COMPULSORY ATTENDANCE.—A few days ago an interesting case was tried before a bench of magistrates of Wawanosh. John Marwood, of lot 30, con. 7, East Wawanosh, in 1875 failed to send his children, aged respectively 12, 10, and 8 years, to school for four months of the year as the law prescribes. He further refused to pay the fine which the trustees are empowered to impose, and which was in this instance fixed at 40 cents per month of absence. The trustees of S. S. No. 7 thereupon cited him before the magistrates, and having consented to cancelling the fine in the case of the younger child, Mr. Marwood was ordered to pay the 80 cents fine. The fine and costs amounted to \$3.85. This should prove a warning to parents who refuse to send their children to school.—*London Free Press*.

At the last regular meeting of the North York Teachers' Association there was a large attendance of teachers from the surrounding country and villages. The principal business transacted was the reading of "Parrhasius," and criticisms thereon; lecture on "Methods of Teaching and School Organization," by Mr. Fotheringham; solution of 2nd class examination paper on Arithmetic, by Mr. Flynn, of Aurora; the Amalgamation of the Library and Teachers' Association of the North Riding of York; Readings by Messrs. Flynn, Dickenson, Beaton, Jewitt, and Rannie; a recitation by Mr. McMahon, and selections of music by Mr. Love; analysis of Gray's Elegy; and arranging the programme for next meeting.

On Friday, Nov. 10th, 1876, a very interesting and instructive meeting of the County of Perth

Teachers' Association took place. Many important subjects were ably discussed. Wm. Alexander Esq., Inspector, was the recipient of an address and presentation from the teachers of the county. Mr. Crooks presented the Ontario Gold Medal awarded to Mr. McLurg, and in so doing spoke highly of Mr. McLurg's scholarly ability. He, Mr. Crooks also delivered a very instructive lecture and was loudly applauded. Many of the teachers and several rev. gentlemen took part in the various discussions which were brought forward.

At the last meeting of the Strathroy Teachers' Association, the programme consisted of "a discussion on Reduction;" Inspector Carson's illustration of his method of teaching a junior class "Count and Add;" Mr. Gibson's method of teaching "Junior Geography;" an Essay on Reading by Mr. Hands, of Jones Commercial College, London, Ont.; Inspector Deames, gave his views on Junior Reading Classes; the presentation of an address to the Hon. Minister of Education; and important remarks from G. G. Ross, Esq.; Mr. Crooks' address. The meeting was very successful.

Dr. Hodgins, Deputy Minister of Education, delivered a lecture in the evening, taking for his subject, "Harmonies and Incongruities of our present School System." The lecture, which occupied nearly two hours, was able and impressive and proved conclusively that though some discontent was often manifested with the workings of the Education Department, yet that department has always aimed at advancing the educational interests of the country at large, irrespective of sectional feeling. The Doctor's remarks elicited the general approval of all present.

HIGH SCHOOL ENTRANCE EXAMINATION.—The examination for admission will be held on Tuesday and Wednesday, the 9th and 10th December, 1876, in accordance with instructions issued.

Mr. Crooks claims that in Ontario we have three essentials of a public school education, viz. a universal, effective, and an economical system.

The Normal Schools of Ontario accommodate 250 teacher students, while 2,000 teachers are presented themselves.

I occasionally notice in the newspapers that thermometers stood higher in the summer and lower in the winter in this town than indicated by my record. This is partly owing to incorrect thermometers, and partly to their location. I have found that the mercury in my glass will fall several degrees on a cool morning when taken to a piece of land forty rods from where it usually hangs. I keep it hanging on the north end of a shed, under the shade of a tree. If hung on the house, built of brick, the mercury will vary from one to three degrees in cold weather, from the heat of the fire inside penetrating the walls. Many persons hang their thermometers on the shade side of a post under the piazza. The reflection of the sun's rays from the house causes the mercury to rise several degrees higher than it would if hung where the sun could have no effect on the glass. The animal heat from a person standing near a thermometer for a few moments on a very cold day will cause the mercury to rise, and in taking the rate of a glass it should be done quickly.—*Manchester Farmer*.

Fireside Department.

Written for the Companion and Teacher.

How Harry Lawrence Changed his Mind.

By T. H. L.

"By Jove, the man's a fool," said Harry Lawrence, *solito roce*, and as a parenthetical comment on the letter he was reading, at he sat at the breakfast table. Though he scarcely intended it, the remark was heard both by his sister and father. The latter said nothing, but the former replied, *anscheinously*. As he's a man, Hal, it's very likely he is. But you have incurred your displeasure now, and what are you going to do to him?"

"My dear Kate," replied Harry, "womanlike, I always ask a great many more questions than it is possible to answer; but I'll tell you as much as I can.—Jack Campbell, an old college chum of mine, has gone married."

"Eh! what, Harry?" cried his father, starting from his perusal of the *Morning Thunderbolt*; "is he mad, eh? Very sad, very sad. How did it happen, eh?"

"No, no father," said Hal, laughing as he spoke; "he's not gone mad, but gone married, although really there is not much difference."

"Ah! Hal, for shame," exclaimed his sister, "I'm sure that's almost profanity."

"Well, it may be, Kate, but it's my belief. A man who gets married turns his back upon the most desirable portion of his life, and gives himself up to an existence of perpetual care and worry and anxiety. But I'm sorry for poor Jack." And Harry went up from his breakfast, and left the room with a sly look, which contrasted greatly with his usual merry, good-humored expression.

"Eh! what's wrong with Harry, eh, Kate?" said Lawrence, as the door closed behind his son.

"I really don't know, papa; but Harry has such peculiar ideas about marrying—I'm sure it's quite new to me."

And so it was, for pretty Kate Lawrence was somewhat of a match-maker, and the openly avowed admirer and misogynistic habits of Harry had already, in more than one instance, foiled her plans for him; and this unnatural disposition of her only daughter, Kate, as she said, found quite a trial, or at least so she imagined, which amounted to the same thing. But defeat had not disheartened, and she was even now plotting a marriage scene in which her brother and one of her most particular friends (who was shortly coming to Coombe Hall on a visit) were to sustain the leading parts.

Coombe Hall is a "picturesque country residence, standing in its own grounds, and distant half a mile from Coombe village" (vide Guide Book); and Coombe, as every one knows, or ought to know, is a little village in the south of Devonshire. And a very pretty little village it is, as it nestles cozily among the trees, with its grey church-tower, ancient ivy-clad, pointing ever heavenward, and the lovely Tamar, in the distance, calmly flowing on towards the sea, a glimpse of which can be caught from the high ground near the Hall. The beauty of the surrounding country it is unnecessary to exultate on, for Devonian scenes are famous for their beauty, and no one who has seen them can ever

forget the rich undulating meadows, the bright fields of waving corn, relieved here and there with dark patches of wood; the quiet shady lanes with their high hedges, thickly covered with fern and vine and ivy, and a thousand wild flowers of rustic beauty, loading the air with fragrance; the bright streamlet singing gaily as it leaps from one moss-covered rock to another, or murmuring softly as it winds through grass and sedge, by the ivy-clad willow and the lordly oak; the deep, still river, clear and trout-halen; the whitewashed cottages and thatch-covered icks; the frequent church and the stately hall, that make up the landscape in the lawland districts of Devon; while the savage grandeur of the tors and moors offers a far different type of beauty to the lover of nature's aesthetics.

But to return. Harry had scarcely time to recover from the ill effects of the announcement of his friend's marriage when the coming of Ada Fanchler (Kate's bosom friend and *prima donna* in the marriage scene before alluded to) gave him new cause for disquietude. He did not meet her on her arrival, but mused himself in his "den," (as Kate said—"study," us he said), and ran over in his mind innumerable schemes for escaping from the persecution he foresaw was coming, invoking to aid his cogitations a well-colored meerschaum of huge dimensions, from which he pulled such volumes of smoke that the room was presently filled with an atmosphere calculated to effectually choke any non-smoker who might have the temerity to enter the apartment. But Harry thought on through it all, until his ideas became as misty as the surrounding objects, and the first dinner-bell rang without finding him in possession of any satisfactory plan. Still the forms of society must be complied with, whatever happens, so Harry reluctantly dressed and went down to dinner, wishing Miss Fanchler anywhere but under his father's roof.

No description will be given of the vision of loveliness that Harry saw when, on his arrival downstairs, he was in due course introduced to his *bete noire pour le temps*. Every one has his own ideal of beauty, and the exercise of a very slight amount of imagination will enable the reader to see that Miss Fanchler is very beautiful, her face divine, her form a realised ideal of perfect grace—at least Harry thought so; yet, though her beauty and grace made, in spite of his bachelor proclivities, a great impression on him, he did not relax that studied reserve which he always assumed in the presence of those ladies whom he imagined to have designs upon him, but maintained an aspect grave and dignified, as he thought—sour and ill-tempered, as Kate and Ada thought. However, they paid no attention to him, but with the aid of Mr. Lawrence, carried on a most animated conversation. Before dinner was over they had arranged walks and amusements for a week at least, but to Harry's surprise, without in any way including him in their plans; and this surprise was increased by the fact, which he could not fail to notice, that after his introduction to her was over, Ada Fanchler seemed completely to ignore his presence. As a rule, the young ladies of his acquaintance had rather set their caps at Harry, who was considered "the eligible" of the neighbourhood, and therefore it is not to be wondered at that our hero was a little spoilt in his notions.

Dinner over, he partook himself to his room, and again invoked the aid of the soothing weed, while he combed over the excuses he should make when asked by his sister to accompany her in a walk. This was Harry's "usual custom of an afternoon"

when any ladies were staying at the house—and a very ungalant custom it was; but on the present occasion he might have saved himself the trouble, for to his intense surprise, Kate and her companion passed his room without vouchsafing the least sign that they were aware of his existence. Harry's first sensation was one of relief, his second one of (must it be confessed) mortified vanity. Poor fellow, it was not his fault, for he had been so much sought after that he had, unconsciously, begun to fancy that his sister and his sister's friend couldn't well get on without him. But this confounded Fanchler girl, mused he, and then his tobacco suffered. In a short time, however, he recovered his wonted spirits, and walked round to the stables. Here another surprise awaited him. John, the groom, met him with a long face, and described how the visitor had taken Aurora (the most spirited animal in the stables, and Harry's own private property), and had driven over to the ferry with Miss Kate. "But," said Harry, "is she able to drive Aurora, do you think?" John thought yes, as she appeared to handle the reins better than most young ladies. He also reported that the young lady, when he remonstrated with her on taking "Master Harry's horse," had said that "Master Harry should have driven her himself." "Well, well," muttered Harry, as he turned away, "a wilful woman must have her way;" and with this consoling thought he again retired to woo solitude.

The window of Harry's "den" commanded a view of the drive which led from the road to the house, and here he stationed himself to watch the arrival of "those headstrong girls." In due time they came, and as Harry noted the way in which Aurara was being handled, he was obliged to admit that John's estimate of Miss Fanchler's driving powers was correct, and he half-determined to congratulate her on her skill; but her remark "that he should have driven her himself" came into his mind, and he concluded with a sigh that she was as bad as the rest.

"A whole week passed, and he had never once been asked by the ladies to favor them with his company. He was getting savage about it, while Kate and Ada seemed to be enjoying themselves more and more every day. He made frequent and vehement resolutions not to think anything more about Miss Fanchler, but broke them as often, as the image of Ada rose in his mind and revolutionised his ideas of women. Like many another who has tried to stifle the growth of a pure love, he—failed. But his sense of what was right at length received a great stroke. One day he found Miss Fanchler alone in the drawing-room. She was singing as he entered, and the mellow tones of her rich contralto voice sent a queer sensation through him, which he would perhaps have found difficult to analyse: but analysis was far from his thoughts. Poor Harry was caught in the toils, and the god of love had taken vengeance on the detractor of his power. Ada ceased singing as the door opened, and turning round on the music-stool, exclaimed:

"Oh! Mr. Lawrence, do come in; I want so much to have a talk with you. You know I'm such a great friend of Kate's, that I may be pardoned for taking an interest in her brother, and I want, therefore, to give the brother a little advice."

Harry murmured something about being "most happy," but could not for the life of him understand what she was driving at.

"Now, don't be too sure about being happy, Mr. Lawrence," continued Ada, "for you haven't heard

what I'm going to say yet. I am going to take to task severely, sir. Now listen: I have been staying here a week or more, and you have never once offered me your services as escort, never spoken to me more than you could help, never looked at me, except with an expression of face sour in extreme. Such a catalogue of offences ought to overwhelm you. I'm not used to such treatment, you know, and don't like it. Now, what have to say before I pass sentence on you?"

He had, of course, nothing to say. This sudden and unexpected attack nearly took his breath away. He only looked at her in a state of perspiring wilderment, but no excuses could he frame.

"I am glad to see," complacently remarked "that you are not graceless enough to offer excuse for your conduct: it is, in fact, most excusable. Why, most young men would have done me an offer long ago." After a slight pause, continued, reflectively "I should so like to see you make a declaration of love. Do, Mr. Lawrence, will you?"

But Mr. Lawrence didn't seem to see the point for he looked very glum, but said nothing.

"Mr. Lawrence," said Ada, severely, "I am surprised at your refusing a lady's request. Get down on your knees at once, sir."

Thus commanded, Harry went down on his knees, but with a bad grace, and thinking of things to himself the while.

"Now commence," said Ada.

"But what am I to say?" asked poor Harry, dolefully, as he reflected that he must be looking very much like a fool, and of course he didn't know what to say.

"Say!" scornfully repeated this peculiar lady; "say! Why, you really ought to say something, what's proper to say when you go on your knees to a lady. But say something, and quickly too, you're looking very ridiculous all this while."

"Dearest Ada," exclaimed Harry, reduced to desperation, "I love you devotedly; will you forgive me?"

And he said this in such a *con amore* way that even Miss Fanchler was taken by surprise, and a faint blush mantled her cheek; but speedily recovering herself, she replied:

"Is that the way you propose? I don't know whether you mean what you say, but you will do better to practice a much better style of declaration than that, if you want me to say yes. And now you go, for I want to get up this song."

Thus dismissed, Harry slowly left the room, and retired to his "den." He was perfectly stupefied with his extraordinary interview with the Fanchler girl, and invoked, as on previous occasions, the aid of the balmy weed to restore him to his usual condition. This accomplished, he resolved to have nothing more to do with Ada Fanchler or any other girl, "bar Kate." But the next morning at breakfast Ada looked so charming, and talked with him so genially, and smiled on him so bewitchingly, and in consequence of this treatment all his virtuous resolutions of the evening before vanished so quickly that ere the matutinal meal was over he had engaged to drive Ada and Kate to the Church, and had promised a yachting party for the next day. Once the ice broken, he was constrained to give up his intentions.

Every day spent in Ada's society only riveted Harry's chains the firmer, and he exerted himself to the utmost to produce a favorable impression. Sometimes he imagined he had succeeded, as

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new warm and even tender in her manner towards him; but as often her mood would change, and she appeared cold and distant, or full of railery and sarcasm—a course of proceeding which soon reduced Harry to a very proper state, and made him anxious to repeat in earnest the proposition he had made before in fun. Fortune was kind to him in this respect, and shortly gave him an opportunity of shaking his mind.

To be continued.

The Cost of a Train.

At the time when the first open court of law was established in Russia, a lady, dressed with the most elegant elegance, was walking on the Moscow promenade, leaning upon her husband's arm, and letting the long train of her rich dress sweep the dust and dirt of the street.

A young officer, coming hastily from a side street, was so careless as to catch one of his spurs on the lady's train, and in an instant a great piece torn out of the costly but frail material of the dress.

"I beg a thousand pardons, madame," said the officer, with a polite bow, and then was about passing on, when he was detained by the lady's husband.

"You have insulted my wife."

"Nothing was farther from my intention, sir," said the husband, "my wife's long dress is to blame for the accident, and I sincerely regret, and I beg you once more to receive my apologies for any carelessness on my part." Thereupon he attempted to hasten on.

"You shall not escape so," said the lady, with a head thrown back in a spirited way. "To-day is the first time I have worn this dress, and it cost me a hundred rubles, which you must make good."

"My dear madame, I beg you not to detain me," said the officer, "I am obliged to go on duty at once. As to the two hundred rubles—I really cannot help the length of your dress, yet I beg your pardon for not having been more cautious."

"You shall not stir, sir. That you are obliged to go on duty is nothing to us. My wife is right; the dress must be made good."

The officer's face grew pale.

"You force me to break through the rules of the court, and I shall receive punishment."

"Pay the two hundred rubles and you are free."

With a quickly changing color in the young man's face, he betrayed how inwardly disturbed he was; but being close up to them both, he said, with apparent self-command:

"You will renounce your claim when I tell you that I am a—a—poor man, who has nothing to live on but his officer's pay, and the amount of that pay only reaches the sum of two hundred rubles in a whole year. I can, therefore, make no amends for my misfortune, except by again begging your pardon."

"Oh! anybody could say all that; but we'll see if it's true; we'll find out if you have nothing but your pay. I declare myself not satisfied with your excuses, and I demand my money," persisted the lady, in the hard voice of a thoroughly unfeeling woman.

"That is true—you are right," the husband said, dutifully supporting her. "By good luck we have the open court now just in session. Go along with us before the judge and he will decide the matter."

He made no further protestation on the officer's part that

he was poor, that he was expected on duty, and so forth, did not help matters. Out of respect to his uniform, and to avoid an open scene, he had to go with them to the court-room, where the gallery was densely packed with a crowd of people.

After waiting some time, the lady had leave to bring her complaint.

"What have you to answer to this complaint?" said the judge, turning to the officer, who seemed embarrassed and half in despair.

"On the whole, very little. As the lateness of the hour, and being required on duty, compelled me to hurry, I did not notice this lady's train, which was dragging on the ground. I caught one of my spurs in it, and had the misfortune to tear the dress. Madame would not receive my excuses, but perhaps now she might find herself more disposed to forgiveness, when I again declare, so help me God, that I committed this awkward blunder without any mischievous intention, and I earnestly beg that she will pardon me."

A murmur ran through the gallery, evidently from the people taking sides with the defendant, and against long trains in general and the lady in particular.

The judge called to order, and asked—"Are you satisfied with the defendant's explanation?"

"Not at all satisfied. I demand two hundred rubles in payment for my torn dress."

"Defendant, will you pay this sum?"

"I would have paid it long before this were I in a position to do so. Unfortunately I am poor. My pay as an officer is all I have to live on."

"You hear, complainant, that the defendant is not able to pay the sum you demand of him. Do you still wish the complaint to stand?"

An unbroken stillness reigned throughout the hall, and the young officer's breath could be heard coming hard.

"I wish it to stand. The law shall give me my rights."

There ran through the rows of people a murmur of indignation that sounded like a rushing of water.

"Consider, complainant, the consequences of your demand. The defendant can be punished only through being deprived of his personal liberty, and by that you could obtain no satisfaction, while to the defendant it might prove the greatest injury in his rank and position as an officer, and especially as he is an officer who is poor and dependent upon his pay. Do you still insist upon your complaint?"

"I still insist upon it."

The course the affair was taking seemed to have become painful to the lady's husband. He spoke with his wife urgently, but, as could be seen by the way she held up her head and the energy with which she snook it, quite uselessly. The judge was just going on to further consideration of the case, when a loud voice was heard from the audience:

"I will place the two hundred rubles at the service of the defendant."

There followed a silence, during which a gentleman forced his way through the crowd and placed himself by the young officer's side.

"Sir, I am the Prince W—, and beg you will oblige me by accepting the loan of the two hundred rubles in question."

"Prince, I am not worthy of your kindness, for I don't know if I shall ever be able to pay the loan," answered the young man, in a voice tremulous with emotion.

"Take the money, at all events. I can wait until you are able to return it." Thereupon the prince held out two notes of a hundred rubles each, and coming close up to him, whispered a few words very softly. There was a sudden lighting up of the officer's face. He immediately took the two notes, and, turning toward the lady, handed them to her with a polite bow.

"I hope, madame, you are satisfied."

With a malicious smile she reached out her hand for the money.

"Yes, now I am satisfied."

With a scornful glance over the crowd of spectators, she prepared to leave the court-room on her husband's arm.

"Stop, madame," said the officer, who had suddenly become like another man, with a firm and confident manner.

"What do you want?"

The look that the young woman cast upon him was as insulting as possible.

"I want my dress," he answered, with a slight but still perfectly polite bow.

"Give me your address, and I will send it to you."

"Oh, no, my dear madame; I am in the habit of taking my purchases with me at once. Favor me with the dress immediately."

A shout of approbation came from the gallery.

"Order!"

"What an insane demand!" said the lady's husband. "My wife cannot undress herself here."

"I have nothing to do with you, sir, in this matter, but only with the complainant. Be so good, madame, as to give me the dress immediately. I am in a great hurry; my affairs are urgent and I cannot wait a moment longer."

The pleasure of the audience at the expense of the lady increased with every word, until it was hard to enforce any approach to quiet, so that either party could be heard.

"Do not jest any more about it. I will hurry, and send you the dress as soon as possible."

"I am not jesting. I demand from the representative of the law my own property, that dress," said the officer, raising his voice.

The judge, thus appealed to, decided promptly.

"The officer is right, madame. You are obliged to hand him over the dress on the spot."

"I can't undress myself here before all these people, and go home without any dress on," said the young woman, with anger and tears.

"You should have thought of that sooner. Now you have no time to lose. Either give up the dress of your own accord, or—" A nod that could not be misinterpreted brought to the lady's side two officers of justice, who seemed about to take upon themselves the office of my lady's maid.

"Take your money back, and leave me my dress."

"Oh, no, madame; that dress is now worth more than two hundred rubles to me."

"How much do you ask for it?"

"Two thousand rubles," said the officer, firmly.

"I will pay the sum," the weeping lady's husband responded, promptly. "I have here five hundred rubles. Give me pen and paper and I will write an order upon my banker for the remaining fifteen hundred."

After he had written the draft the worthy pair withdrew, amidst hisses from the audience.

Query: Did the lady ever again let her train weep the street?

Miscellaneous.

THE TRAMP WHO HUNGRED AND THIRSTED FOR WORK—A robust tramp called to a house for something to eat, averring that he had not tasted for week.

"Why don't you go to work?" asked the lady to whom he preferred his petition.

"Work!" he ejaculated. "Work! And what have I been doing ever since the middle of May but hunting work? When did I ever see work?"

"Well," said the woman, "I guess I can get you some employment. What can you do?"

"Anything!" he shouted in a sort of delirious joy. "Anything that any man can do. I'm a hand for something to fly at. Why, only yesterday I worked all day carrying water in an old sieve from the Flint river and emptying it into the Mississippi just because I was so tired of having nothing to do and had to work at something or I would have gone ravin' crazy. I'll do anything, from clearing a house to building a steamboat. Just give me work, ma'am, an' you'll never hear me ask for bread again."

The lady was pleased at the willingness and anxiety of this industrious man to do something, and she led him to the wood pile.

"Here," she said, "you can saw and split wood, and if you are a good, industrious worker will find work for you to do nearly all winter."

"Well, now," said the tramp, while a look of disappointment stole over his face, "that's my luck. Only three days ago I was pulled blind cow out of a well for a poor widow woman who had nothin' in the world but that cow to support her, an' I spraint my right wrist till I been able to lift a pound with it since. You just put your hand on it now and feel it throbbin' so painful and inflamed. I could just cry of appointment, but it's a Bible fact, ma'am, they couldn't lift that axe above my head if I died with it, and I'd jest as lief let you pull my arm out the roots as to try to pull that saw through a log. Jest set me at something I can do, though, if you want to see the dust fly."

"Very well," said the lady, "then you can tend these flower beds, which have been very much neglected, and weed them very carefully for me. You can do that with your well hand, but I want you to be very particular with them, and get them very clean, and not injure any of the plants, for they are all very choice and I am very proud of them."

The look of disappointment that had been chased away from the industrious man's face when he saw a prospect of something else to do, came back deeper than ever as the young lady described the new job, and when she concluded, he had to remain quiet for a moment before he could contain his emotion sufficiently to speak.

"If I ain't the most unfortunate man in Ameriky," he sighed. "I'm jest dyin' for work crazy to get something to do, and I'm blocked up with work at every turn. I jest love to work and dig flowers, and dig in the ground, but I never dast to do it, fur I'm jest blue ruin among the poor. Nobody ever cared to teach me anything about flowers, and its a gospel truth, ma'am, I can't tell a violet from a sun-flower, nor a red rose from a dog kennel. Last place I tried to get work at, was

the house set me to work weedin' the garden, I worked about a couple of hours, monstrous to get work now you bet, an' I pulled up my last livin' green thing in that yard. Pulled all the grass, every blade of it. Fact. Pulled the vine with seventy-five dollars that had roots chin 'ellar under the cellar and into the cistern, I yanked 'em right up, every fibre of 'em. The man was so heart broke when she came out and the yard just as bare as the floor of a brick ed, that they had to put her to bed. Bible truth, my dear, ma'am; and I had to work for that house two months for nothin' and find my board to pay for damage I done. Just gimme suthin' I kin do, show you what work is; but I wouldn't dare to foolin' around no flowers. You've got a kind of art, ma'am, gimme some work; don't send a pairin' man away hungry for work."

"Well," the lady said, "you can beat my carpets me. They have just been taken up, and you beat them thoroughly, and by the time they are done I will have something else ready for you."

The man made a gesture of despair, and sat down on the ground the picture of abject helplessness and disappointed aspirations. "Look at me now," he exclaimed. "What is it to become of me! Did you ever see a man so down in luck like me? I tell you ma'am you must me somethin' I can do. I wouldn't no more for to tech them than nothin' in the world, tear 'em to pieces. I'm a awful hard hitter, the last time I beat any carpets was for a man out at Creston, and I just walted them into strings and carpet rags. I couldn't lift. I can't hold in my strength. I'm too tired to get work, that's the trouble with me, ma'am, it's a Bible fact. I'll beat them carpets if you say so, but I won't be responsible for 'em; no more will I work for nothing for five or six weeks for tearin' 'em into slits, you know. I'll beat 'em if you say the word and take the responsibility, but the fact I'm too hard a worker to hold 'em around carpets, that's just what I am."

The lady excused the energetic worker from working at the carpets, but was puzzled what to set him to. Finally she asked him what there was he would like to do and could do with safety to himself and the work.

"Well, now," he said, "that's considerit in ye. I'll be your real considerit, and I'll take a hold and do anything that'll give ye the wuth of yer money, but I won't give me no chance to destroy nothin' by my kin' too hard at it. If ye'll just kindly fetch me a rockin' chair, I'll set down in the shade and let the cows from liftin' the latch of the front door and gettin' into the front yard. An I'll do it for nothin' and only charge you reasonable for it; fur the fact is, I'm so deady crazy for work that it isn't no pay I want so much as a steady job."

And when he was rejected and sent forth jobless and breakfastless, to wander up and down the cold, dreary world in search of work, he cast stones at the house and said, in dejected tones:

There, now, that's just the way. They call us a bad lot, and they say we're lazy and thieves, and that we don't work, when a feller is just crazy for work, and nobody won't give him nary job that he kin do. Won't work! Lands alive, they won't give us no work; and when we want to, an' try to, they won't let us work. There ain't a man in Ameriky that would work as hard an' as stiddy as I would, if you'd gimme a chance.

HOW MR. BUTTERWICK COUNTED HIMSELF TO SLEEP.—Mr. Butterwick, of Roxborough, had a fit of sleeplessness one night, lately, and, after vainly trying to lose himself in slumber, he happened to remember that he once read in an almanac that a man could put himself to sleep by imagining that he saw a flock of sheep jumping over a fence, and by counting them as they jumped. He determined to try the experiment, and, closing his eyes, he fancied the sheep jumping, and began to count. He had reached his 140th sheep, and was beginning to dose off, when Mrs. Butterwick suddenly said:

"Joseph!"

"O, what?"

"I believe that yellow hen of yours was to set, O, don't bother me with such nonsense as that now. Do keep quiet and go to sleep."

Then Butterwick started his sheep again and commenced to count. He got up to 120, and was feeling as if he would drop off at any moment, when, just as his 121st sheep was to take that fence, one of the twins began to cry.

"Hang that child!" he shouted at Mrs. Butterwick; "why don't you tend to it and put it to sleep? Hush up, you little imp, or I'll spank you!"

When Mrs. Butterwick had quieted it, Butterwick, although a little nervous and excited, concluded to try it again. Turning on the imaginary mutton, he began. Only sixty-four sheep had slid over that fence, when Butterwick's mother-in-law knocked at the door and asked if he was awake. When she learned that he was, she said she believed he had forgotten to close the back shutters, and she thought she heard burglars in the yard.

Then Butterwick arose in wrath and went down to see about it. He ascertained that the shutters were closed as usual, and as he returned to bed he resolved that Mrs. Butterwick's mother would leave the house for good in the morning or he would. However, he thought he might as well give the almanac plan another trial, and setting the sheep in motion, he began to count. This time he reached 240, and would probably have got to sleep before the 300th sheep jumped, had not Mix's new dog in the yard become suddenly homesick, and began to express his feelings in a series of prolonged and exasperating howls.

Butterwick was indignant. Neglecting the sheep, he leaped from the bed and began to bombard Mix's new dog with boots, soap-cups, and every loose article he could lay his hands on. He hit the animal at last with a plaster bust of Daniel Webster, and induced the dog to retreat to the stable and think about home in silence.

It seemed almost ridiculous to resume those sheep again, but he determined to give the almanac man one more chance, and so as they began to jump the fence he began to count, and after seeing the 82nd sheep safely over, he was gliding gently in the land of dreams, when Mrs. Butterwick rolled out of bed and fell on the floor with such violence that she waked the twins and started them crying, while Butterwick's mother-in-law came down stairs four steps at a time to ask if they felt that earthquake.

The situation was too awful for words. Butterwick regarded it for a minute with speechless indignation, and then seizing a pillow he went over to the sofa in the back sitting-room and lay down on the lounge.

He fell asleep in ten minutes without the assistance of the almanac, but he dreamed all night that he was being butted round the exeat by a Cotswold ram, and he woke in the morning with a ter-

rible headache, and a conviction that sheep are good enough for wool and chops, but not worth a cent as a narcotic.

THE SHARPEST TRICK YET.—A gentleman who has recently returned from a business trip to Texas, related to us an instance of sharp practice on the part of a trio of thieves, which we think is entitled to pre-eminence in the line. Immediately over one of the banks in Dallas is the telegraph office, and a few days ago two of the operators applied for their discharge, received it, and left town. On the day following a well-dressed business-appearing man appeared at the bank with a cheque for \$10,000 on a well-known New York banking-house, and desired it cashed. He brought with him numerous letters of recommendation from parties with whom the bank had business transactions, and, so far as surface indications went, everything was all right. But \$10,000 dollars was a considerable sum to pay out, even on the very best documents of recommendation, and the bank officers hesitated, wavered, and finally declined to cash the cheque. But the stranger was importunate. "Gentlemen," said he, "I came to Texas to invest this money in cotton; it is very necessary that this cheque should be cashed, or I will be greatly inconvenienced. Suppose you telegraph to New York to this banking house? Ask them about me; I will pay all expenses." Nothing could be more plausible than this; nothing sound more honest. So a dispatch was sent asking about the stranger and the cheque, and in a short time came the answer, to the effect that it was all right, and the Dallas Bank would confer a favour on the New York firm by accommodating the cotton-speculating friend, and cashing the cheque. Still the bank officers were not satisfied, and the dispatch to New York was duplicated. Again the answer was of a similar tenor, only probably a little more emphasis was added to it. This was satisfactory, and the cheque was duly cashed. It seems to be the practice of operators to go over their day's work at night briefly by asking the different points to which dispatches have been sent, whethy they have been sent or not. On inquiring of the New York operator whether dispatches 13 and 14 had been received, a negative answer was returned. No such dispatches had come to hand, and consequently no answers could have been sent. It was evident that the bank had been swindled, but how? There was the mystery. The dispatches had been regularly received, they had come from somewhere, but where from could not be known. The cotton speculator had disappeared with the funds, and the bank officials were at their wits' ends. In a day or two the mystery was solved. The two telegraph operators referred to above had gone a few miles out of Dallas, taken possession of an old shanty by the roadside, attached a battery to the wires, and taken the dispatches intended for New York off. They had been sent pre-arranged answers. The three were confederates, and the operators knew about the time the bogus speculator would enter the bank; and when to attach their instruments. It was an adroit scheme, and successfully carried out. The bank has no clue to the swindlers, but has learned a valuable lesson and paid a high price for tuition.

"MOTHER IS NEVER AT HOME."—Willie, once my private pupil, was the son of a very rich man in A—, a generous, good-hearted boy, bright

enough, but the prospects of great wealth to away his care for books and love of study. His habits were forming, and he was in great danger for he had no lack of spending money, and had no lack of companions of whom some were wise and dissipated. But this could not yet be said of Willie.

One morning as he entered my room and laid down his books, he took from his pocket some bit looking cigars, and handing them to me, said

"Don't you want a good smoke, sir? These are very nice, real Havannas."

"No, thank you, Willie," I was happy to reply, "I am glad I am not in the habit of smoking."

"Well," he added, "I smoked too much last night; and besides, I have no lessons this morning."

"How does this happen, Willie?" I asked. "Tell me where you were and what you did last night."

"Ho! nothing much," said he. "I was out with the boys at the new billiard saloon; but I had a splendid time!"

"Willie," I asked, "did you drink, too?"

"O, no, I didn't drink. Some of the boys drank too much; I only played and smoked a bit much, as I said before."

"Well," I said, "I am glad to hear, Willie, you don't drink, and now tell me, please, truly and frankly, if you think you felt as well this morning—weary and tired, without your lessons—as you would had you spent the evening quietly in your own pleasant home, with your books and with your mother?"

"Ah! to tell the truth," he added, with a stifled sigh, "mother is never home evenings like me to go with."

Sad truth! I could say no more. But, as I wished, for Willie's sake, his mother thought of society and more of her boy.

Literary Notices.

CAMPBELL'S GEOGRAPHY.—Messrs. Reid & Co. of this city, have shown us the fifth edition of Campbell's Geography, which has just been issued. It is a great improvement on, and complete revision of the former edition, particularly the part of the work relating to the Dominion of Canada. Recently formed political divisions, such as the Northwest, are fully described. Changes of seats of Government are noted; errors of previous editions corrected; fuller and more accurate information given. Statistics, both home and foreign, have evidently been corrected from the latest authentic reports. The maps in this edition are by S. B. Tholomew. They are brighter, and there are more of them than in the former edition. The maps of the Hemispheres, Dominion of Canada, Ontario, Quebec, and the United States, are double-page maps.

READINGS, RECITATIONS AND DIALOGUES.—The Sons of Temperance, Good Templars, Cadets, &c. This is a great and useful little work, published in Toronto, Ont., by Messrs. Hunter, Rose & Co., and edited by Geo. Macklin Rose, Esq., P. G. W. J. S. of T., the object of which is to afford amusement and profit to the members of Bands of Hope, temperance societies, &c. The selections contained are choice, and show the author's adaptability to the work.

Scientific and Literary.

Facts About Printing.

The following chronological table gives authentic information as to printing:—

- 400. Playing cards were first printed from blocks, in Europe.
- 440. John Genesteish, surnamed Guterburg, printed from wooden blocks, in alphabetical language.
- 445. John Madenbuch assists Gutenberg and Faustus in printing. Faustus and Peter Schoeffer invent moveable metal type, and the punches, galleys and matrices for casting them.
- 462. Faustus printed the Bible copies of which sold as high as 500 crowns apiece. Having reduced the price to 30 crowns by the use of the printing-press, he was believed to be in league with the devil, and had to explain his art to save his life.
- 466. *Cicero de Officiis*, was printed by Faustus, soon after died.
- 473. Greek was first printed.
- 474. Printing first practiced in England.
- 475. First almanac printed.
- 495. Wilkin de Worde printed the first book of paper manufactured in England.
- 499. First geographical work printed in Spain.
- 501. Inquisition at Venice to check the spread of knowledge by the printing press.
- 522. Hebrew was printed in Germany.
- 522. Gazetteers first published in Venice, and named from a coin called a gazetta, which was used to hear them read.
- 527. The first book on longitude, written by Thomas Digges, was printed in Portugal.
- 534. First alphabet for deaf and dumb printed in England.
- 571. Printers in Paris authorized to wear black gowns as a mark of respect.
- 576. Book of Diaphantine Algebra first printed.
- 585. *English Mercuria*, a pamphlet printed, was the first attempt at periodical literature.
- 600. First Decimal Arithmetic published in England.
- 612. King James' Bible, the edition now in use, after seven years of preparation, was printed.
- 615. Napier's Logarithms printed.
- 639. First printing in the United States, done at Cambridge, Mass.
- 649. First Code of Pension Laws printed.
- 651. *The Public Intelligence*, by Sir Robert Dodsley, the first newspaper printed in England.
- 655. First treatise on Insurance published.
- 657. *Boston News-Letter*, first newspaper in the United States, published by John Campbell, a Scotchman.
- 686. Dr. Franklin, the American printer, was in Boston.
- 699. *Weekly Mercury*, first paper printed in Philadelphia, established.
- 698. *New York Gazette*, first paper printed in New York.
- 697. First printing done in Georgia.
- 696. *Maryland Gazette* first issued.
- 691. Printing first attempted in South Carolina.
- 692. First printing on paper made in United States.
- 695. Johnson's Dictionary printed in England.
- 691. Printing in Louisiana.

- 1797. First printing in Mississippi.
- 1799. *Mississippi Gazette*, printed at Natchez.
- 1814. Printing in Alabama first attempted.
- 1828. Nine hundred newspapers printed in the United States.
- 1836. Thirteen hundred newspapers in the United States and Territories.
- 1875. Over eight thousand newspapers and periodicals published in the United States and Territories, and Canada.

Aphorisms of Pestalozzi.

The mode of familiarizing a child with the habit of thinking on what he sees, and speaking after he has thought, is not to talk much to, but to enter into conversation with him.

Not to address to him many words, but to bring him to express himself on the subject.

Not to exhaust the subject, but to question the child about it, and let him find out and correct the answers.

The attention of a child is deadened by long expositions, but roused by animated questions.

Let the questions be short, clear, and intelligible.

Let them excite the child to observe what is before him; to recollect what he has learned; to master his little stock of knowledge for materials for an answer.

Show him a certain quality in one thing, and let him find out the same in others.

Tell him that the shape of a ball is called round.

If you bring him to point out other objects to which the same predicament belongs, you have employed him more usefully than by the most perfect discourse on rotundity.

In the one instance he would have had to listen and to recollect; in the other, he has to observe and to think.

When I recommend to a mother to avoid wearying her child by her instructions, I do not wish to encourage the notion that instruction should always take the character of amusement, or even of a play.

A child must, very early in life, be taught that exertion is indispensable for the attainment of knowledge.

But a child should not be taught to look upon exertion as an evil.

The motive of fear should not be made a stimulus; it will destroy interest, and speedily create disgust.

Interest in study is the first thing which a teacher, a mother, should endeavor to excite and keep alive.

There are scarcely any circumstances in which a want of application in children does not proceed from a want of interest.

There are, perhaps, none in which a want of interest does not originate in the mode of teaching adopted by the teacher.

In saying this I do not mean to make myself the advocate of idleness or irregularities.

But I would suggest that the best means to prevent them is to adopt a mode of instruction by which the children are less left to themselves—less thrown upon the unwelcome employment of passive listening—less harshly treated for little and excusable failings, but more roused by questions, animated by illustrations, interested and won by kindness.

There is a reciprocal action between the interest which the teacher takes and that which he communicates.

If he is not, with his whole mind, present at the subject—if he does not care whether it is understood or not, whether his manner is liked or not—he will never fail of alienating the affections of his pupils and rendering them indifferent to what he says.

But real interest taken in the task of instruction—kind words, and kinder feelings, the expression of the features and the glance of the eye—are never lost upon children.—*Brooklyn Journal of Education.*

A Remarkable Cavern.

Professor Andrews, of this city, and a member of the State Geological Board, in company with Judge Silas H. Wright, recently visited the famous Ash Cave, in the southern part of Hocking County, for the purpose of exploration and archaeological research, and were richly rewarded for their long and toilsome trip, in the discoveries made and relics secured.

The country round about Ash Cave is extremely wild and mountainous, almost wholly unfit for agricultural pursuits, as the soil is thin, sterile and covered with ragged rocks and a scraggy growth of evergreens. There are numerous caverns, and subterranean retreats in the vicinity, but none nearly so large nor remarkable in gloomy and mysterious aspect as Ash Cave. This is a cavern of enormous dimensions, and receives its name from a large bed of ashes, fully one hundred and twenty-five feet in length and from thirty to thirty-five feet in breadth, which lies at the base of a ragged, rocky and perpendicular cliff, and in immediate juxtaposition with the cavern. The cave itself is a mammoth one, although not extending very far back into the bowels of the earth, but where the black, frowning, age-begrimmed rocks loom up at least one hundred and fifty feet high, and project out half that distance from a sheltered place of sufficient dimensions to comfortably accommodate several regiment of soldiers, at the same time making a picture of wild sublimity.

The bed of ashes spoken of presented the same appearance sixty-five years ago, when this secluded spot was first penetrated, that it does now, and how they ever came, and who brought them into existence, is a problem too profound for solution by either scientist or historian, being probably the work of the mound-builders, or some other prehistoric race. They are well-protected from the rains and inclement weather by the over-topping rocks, and are dry as powder, of a bluish white, lustrous color, and strong in the elements of potassium, which made Ash Cave a great rendezvous for soap-makers in the days of the early settlements.

There are many lugubrious incidents connected with the place, that have been handed down from generation to generation, through cobwebby tradition, that have enshrouded the neighborhood in weirdness and gloom, and it is seldom visited save by the ambitious explorer or reckless picnicker. One old story is to the effect that the cave was the burial place of a tribe of gigantic men, who had existed long prior to Sitting Bull's ancestors, who disposed of their dead by cremation. What truth there is in this tale is commensurate with the credulity of its hearers.

Professor Andrews and Judge Wright spent a

whole day with their explorations in and about the cave. After a careful examination of the strata they dug a trench, about four yards long, and about two in width, in the middle of the ash-bed to see what depth it ran and what its nature was beneath the surface. For a foot they dug through pure ashes, when they reached a strata of about fourteen inches in thickness, made up of decayed and petrified vegetable matter, intermixed with charcoal, siliceous arrowheads, animal bones and broken pottery. Immediately under this deposit they found the dessicated skeleton of a human being. He had been entombed in a sitting posture in a mausoleum of sandstone, and surrounded by the thickness of a foot or more with dry ash similar to those found on the surface. Close to the skeleton, in a hole scooped out of the granitic rock, was found over a bushel of tiny black seeds, so what similar to flax, but infinitely smaller. All the valuable relics were carefully gathered up, preserved, and Professor Andrews has forwarded a quantity of ashes and the unknown seed to the Peabody Institute in Massachusetts for analysis and exhibition.

Further search was made, other excavations made, and although no more skeletons rewarded their labors, a number of curious utensils of flint, bone and clay, were found. Among the bone implements unearched were three or four stone shaped concerns, instruments probably used in the manufacture of clothing, and so forth. Earthenware was found only in small fragments and no conception can be formed of their original shape or design.

Professor Andrews intends to visit Ash Cave again at an early day, and more thoroughly explore the whole region, and his efforts doubtless result in some very important and valuable discoveries, especially to geologists and archaeologists.

Chronology of some Importance. B. C.

Maps, globes and dials were first invented by Anaximander, in the sixth century before Christian era. They were first brought into England by Bartholomew Columbus, in 1480.

Comedy and tragedy were first exhibited at Athens, 562 years B. C.

Plays were first acted at Rome, 239 B. C.

The first public library was founded at Athens, 526 B. C.

The first public library was founded at Rome, 167 B. C.

The first public library was founded at Alexandria, 284 A. D.

Paper was invented in China, 170 B. C.

The calendar was reformed by Julius Cæsar, 45 B. C.

Insurance on ships and merchandise first introduced in A. D. 43.

Saddles came into use in the fourth century.

Horse-shoes made of iron were first made in A. D. 481.

Stirrups were not made till a century later.

Manufacture of silk brought from India to Europe, 551 A. D.

Stone buildings and glass introduced into Europe, 674 A. D.

Pens first made of quills, D. A. 635.

Pleadings in courts of judicature introduced in D. 788.

The figures of arithmetic brought into Europe by the Saracens, A. D. 991.

Paper of cotton rags invented towards the close of the tenth century.

Paper made of linen, in 1300

The degree of Doctor first conferred in Europe at Bologna, in 1130; in England, 1208.

The first regular bank was established at Venice, 1157. The bank of Genoa was established in 1407; that of Amsterdam in 1609; England, 1674.

Astronomy and geometry brought into England, 1230.

Linen first made in England, 1253.

Spectacles invented, 1280.

The art of weaving introduced into England, 1300.

Musical notes, used, invented 1350.

Gunpowder invented at the City of Cologne, by Schwartz, 1320-40.

Canon first used at the siege of Algeziras, 1420.

Muskets in use, 1370.

Pistols in use, 1544

Printing invented at Mentz, Guttenberg, 1450.

Printing, introduced into England, 1471.

Post-office established in France, 1464; in England, 1581; in Germany, 1641.

Turkeys and chocolate introduced into England from America, in 1529.

Tobacco introduced into France by Nicot, 1560.

First coach made in England, 1564.

Clocks first made in England, 1608.

Potatoes first introduced into Ireland, in 1586.

The circulation of the blood discovered by Harvey, 1629.

Odd Titles of Old Books.

MOSTLY PUBLISHED IN THE TIME OF CROMWELL.

A Fan to drive away Flies: a theological treatise on Purgatory.

A most Delectable Sweet Perfumed Nosegay of God's Saints to Smell at.

A Pair of Bellows to blow off the Dust cast upon an Fry.

A Proper Project to Startle Fools: Printed in a land where Self's cry'd up and Zeal's cry'd down.

A Reaping-Hook, well tempered, for the Stubborn Ears of the coming Crop; or, Biscuit baked in the Oven of Charity, carefully conserved for the sickness of the Church, the Sparrows of the Spirit, and the sweet Swallows of Salvation.

A Sigh of Sorrow for the Sinners of Zion, leached out of a Hole in the Wall of an Earthly vessel, known among Men by the Name of Samuel's (a Quaker who had been imprisoned.)

A Shot aimed at the Devil's Head-Quarters through the Tube of the Cannon of the Covenant.

Crumbs of Comfort for the Chickens of the Covenant.

Eggs of Charity, layed by the Chickens of the Covenant, and boiled with the Water of Divine Love. Take Ye and eat.

High-heeled Shoes for Dwarfs in Holiness, Hooks and Eyes for Believers' Breaches, Matches lighted by the Divine Fire.

Seven Soils of a Sorrowful Soul for Sin, or the seven Penitential Psalms of the Princely Prophet David: whereunto are also added, William Husus' Handful of Honeysuckles, and Divers Godly and Pithy Ditties, now newly augmented.

Spiritual Milk for Babies, drawn out of the breasts of both Testaments for their Souls' Nourishment: a catechism.

The Bank of Faith.

The Christian Sodality; or, Catholic Hive of Bees, sucking the Honey of the Churches' Prayer from the Blossoms of the Word of God, blowne out of the Epistles and Gospels of the Divine Service throughout the year. Collected by the Puny Bee of all the Hive not worthy to be named otherwise than by these Elements of his Name, F. P.

The Ginn of Penitence.

The Innocent Love; or, the Holy Knight: a description of the ardors of a saint for the Virgin.

The Shop of the Spiritual Apothecary; or a collection of passages from the fathers.

The Sixpennyworth of Divine Spirit.

The Snuffers of Divine Love.

The Sound of the Trumpet: a work on the day of judgment.

The Spiritual Mustard Pot, to make the Soul Sneeze with Devotion.

The Three Daughters of Job: a treatise on patience, fortitude, and pain.

Tobacco battered, and the Pipes shattered about their Ears that idly idolize so loathsome a Vanity, by a Volley of holy shot thundered from Mount Helicon: a poem against the use of tobacco, by Joshua Sylvester.

Vox Cœlis; or, News from Heaven: being imaginary conversations there between Henry VIII, Edward VI, Prince Henrie, and others.

As an evidence that iron will not oxidize in pure water, a scientific writer remarks as follows.—Take a piece of clear iron, melt it, and heat to boiling; after boiling it a short time to free it of air, pour it into a small vial containing some pieces of bright iron wire, the vial to be quite full and tightly stopped. Place a small piece of wire in an open vessel and partially cover it with water. Set both vessels aside for a few days, when it will be found that the wire in the former is still bright, while that in the other is rusted. This experiment shows that it is the oxygen of the air, and not that chemically combined to form water, which acts upon iron; moreover, experiment has shown, beyond any reasonable doubt, or question, that neither dry oxygen nor dry carbonic acid will attack iron. To produce the action of common oxidation upon iron, it is necessary that the oxygen be combined with nitrogen, as it exists in the atmosphere, and in all potable water.

ANCIENT GLASS WORKS.—The London Academy draws attention to the fact that the most ancient manufactories extant are the glass works at Venice and Murano. They have uninterruptedly survived over the period of twelve centuries, before and since St. Benedict, who engaged Venetian artists to furnish the windows of Wearmouth Abbey, A. D. 674. In the fourteenth century this fabric roused the jealousy of France. In 1663, the Duke of Buckingham petitioned Charles II, for the renewal of a patent for making crystal looking glasses, coach glasses, etc., which he claimed to have brought, after much expense in finding out the mystery, to as great perfection as those made in Venice, from whence, he said, they were then forbidden to be exported unless wrought and polished.

The observations of M. Janssen at Nagasaki, Japan, have proved beyond dispute that a luminous atmosphere surrounds the sun.

Children's Department.

No one so well as ourselves, who have read the many letters from the children with which we have this month been favored, can understand the pleasure they experience on account of our introduction of this department once more in the COMPANION AND TEACHER. As for ourselves, we are more than pleased with the manner in which our young friends have taken hold of the work given them to do. The results are favorable, as all will admit, when we say that we have received no less than 43 lists, containing in the aggregate 53,774 words, or an average of over 1,250 words from each contributor. The largest list contained 3,775 words, and the smallest 184. In justice to many of the contributors, we should say that the COMPANION AND TEACHER was in their hands only a few days before they were required to send in their lists, so that they were necessarily incomplete. Altogether, we are pleased that such was the case, as our labors in examining the lists have been quite as arduous as we could wish. Some, however, have given us unnecessary trouble by sending in their lists unnumbered. Others have sent lists that are very carefully prepared and written, and reflect much credit not only upon themselves, but on their teachers. Some have not heeded our advice to send lists in an unsealed envelope, marked "For the Press," and, as a result, they have had to pay three times as much for postage as they required to have done. Remember that when the above directions are adhered to, the necessary postage is only one cent per doz., instead of three cents. Some of the lists are written upon no less than six sheets of foolscap paper, and the amount of labor required to produce them can only be imagined by those who did not actually perform the work. We do not wonder, therefore, that some say "I never was so tired in my life," "I have used up all my paper," "I thought it would be easy, but found it hard work," &c. Others say "Our teacher gave us the words," "I am very glad you have commenced the Children's Department again." "Nothing will attract a child's attention quicker than a puzzle. A puzzle is a thing which will make a dunce study, and if you want to make good men and women out of children, give them things that will make them work, and a prize, too, if they succeed." These words should be engraved in letters of gold on the walls of every home, and should guide parents in their treatment of their children, who may be made to work hard, and willingly, too, and acquire far more knowledge and real benefit than if everything were driven into them, as in many cases. Another contributor says "I hope you will not laugh at my *afid* writing: I will bet it is the worst you have ever seen." Now, we want our young friends to understand at once that we do not intend to hurt their feelings when we print anything we receive from them that is not commendable or correct. When we reproduce anything of this kind, it is because we wish to show the writer and others how it looks in print, so that they may guard against making the same mistakes again. There is nothing very wrong in the above, as the writer is a mere child and can be excused for the incorrectness in spelling, and though our young friends should not adopt the manner of speech used only by gamblers and low-bred people, we know that in this case no harm was intended. We trust

that when we have occasion to copy other and perhaps greater mistakes, our young contributors will not feel cross and say "He's real mean, and I never write to him again." That we should regret, especially as such an action would debar the writer from deriving any future benefit from the Department.

In last number we announced that we should require our friends to write us a letter this month and we hope hundreds will do so. We have not to say, however, that we expect all to do as well as they can. If any letter shows that the writer did not use every endeavor to make it a good one we will not read it or place it in competition. Write on any subject you choose this time—not a long letter, but a short one. Say what you have to say, and then stop. Make your statements complete and do not run them into each other. Let each idea stand in a sentence by itself, in its simplest form. You will soon enough learn to fear compound sentences. Begin each sentence with capital letter, but do not fall into the absurd habit of commencing every line in the same way. Please observe these directions carefully, and we will have many bad letters to look over. A few of the best letters we will publish in our next number and we will also publish the *worst one*, without the name of the writer.

We are sorry that only three will be able to secure prizes, as many more already deserve it. Remember that though we shall be glad to receive letters from those who have not sent us lists of words, only those will be allowed to compete for the prizes offered. We will, however, give the COMPANION AND TEACHER free for one year, without premium, to the boy or girl who has not written to us, who will this month send us the best letter. This will give all a chance to secure one of the four prizes now offered.

In conclusion, we must remind all to forward contributions before the 15th, as we go to press the 20th. Competitors must state age, and if of school age, they must be in actual attendance at the time of writing at some school or college. If your teacher is good natured, as he should be, show him your letter before sending it to us, and if it says it will do, send it along.

We promise something more attractive after New Years in the way of puzzles, &c., and if the interest is continued in this department, will sometimes print new Dialogues, Readings, &c., suitable for school entertainments, &c.

We hope to see you again before New Years, meantime we wish you all *A Merry Christmas*.

A Big Prize.

A copy of Webster's *New Unabridged Dictionary* should be placed in every school library. If a school has no library, the dictionary is a complete one in itself. It is bound in leather, and contains 1,840 pages, 3,000 illustrations, and over 114,000 words. The publisher's price for it is \$12, but we will send it to any boy or girl who sends us one for the COMPANION AND TEACHER to the value of \$40. Every subscriber will receive a premium, and the one who gets up the club will get a dictionary which he may keep himself, or present to the school, and thus memorialize himself. A club can easily be raised in any School Section in Canada. We will send us the first club?

OUR ADVERTISING RATES:

Space.	1 m.	3 m.	6 m.	12 m.
1 inch	\$ 0 60	\$ 1 50	\$ 2 75	\$ 5 00
2 inch	1 00	2 50	4 50	8 00
3 inch	1 75	4 25	7 75	14 00
1/2 column	3 25	8 00	14 50	26 00
1/3 column	6 00	15 00	27 00	48 00
1/4 column	10 00	25 00	45 00	80 00

There will be twelve lines in an inch, eight inches a column, and two columns in a page. When contracts are made, accounts will be rendered quarterly after the first insertion, and payment will be required within *thirty days*.

OUR SUBSCRIPTION RATES.

For the COMPANION one year and one premium chromo, post paid, to any address \$1 50
 For one or more extra chromos, each post paid 90
 For the COMPANION one year and one premium crayon, post paid, to any address..... 1 00
 For one or more extra crayons, each post paid 30
 For the COMPANION alone, 6 months, post paid..... 50
 For single copies of the COMPANION, post paid 10
 The following discounts will be made to societies, individuals ordering for a club.—
 For a club of 5 we give 10 per cent. off above rates
 " " 10 " 15 " " "
 " " 20 " 20 " " "

Those who can get up larger clubs than the above may write to us for special terms and discounts.
 In every case the premium chromos and crayons will be sent prepaid, by mail or express, to the subscriber or the person getting up the club.

OUR LIST OF PREMIUMS.

The premiums we now offer to subscribers are as follows.—

CRAYONS.

(1.) "The Offer." (2.) "Accepted." (3.) "Love as a Thread." (4.) "Yes or No." (5.) "The Scent from the Cross." And (6.) "Immaculee Conception." Size of each, 22 x 28 inches.

CHROMOS.

(1.) "Lake Maggiore." (2.) The Babe of Bethlehem. (3.) "Isle of Man." (4.) "Isle of Wight." (5.) "Beatrice de Cenci." And (6.) "The Vestal Virgin." Size of Nos. 1 and 2, 17 x 25; 3 and 4, 22 x 26; and 5 and 6, 24 x 30 inches.

CANVASSERS WANTED.

We are now prepared to receive applications from any of our readers, or their friends, who have spare time to canvass their town or township thoroughly. We do not care whether our agents are us all or only a part of their time, so long as they make a thorough canvass of the territory they undertake to work, and for which we will give them the exclusive right. We guarantee good wages to any such; and are now prepared to give particulars, terms, etc., to applicants for territory.

Rembance.—1st, that in the hard times a cheap article will sell readily, while more expensive ones will remain unsold; and, 2nd, that those who apply first will receive the choice of territory.

CC IPANION PUBLISHING CO.,
 527 Richmond-St., London, Ont.

Publishers' Department.

The October Number.—So many enquiries have reached us (many of them, we are sorry to say, from teachers) about this No., that we are compelled to repeat that *no October number was printed*. We stated in September No. that only two numbers would be printed before New Years, and in last number we said that No. 9 (the Sept. No.) completed the current volumes of the COMPANION and "Ontario Teacher," and that the November No. was the first of a new volume. In the face of this, however, so many have stupidly written to us about an intermediate number, that we have given no reply. We find, too, that the late publishers of the "Ontario Teacher" have been similarly annoyed, as they have forwarded the following for publication—"Numerous enquiries have reached us in regard to the October No. It was distinctly stated in the Sept. No. of the "Ontario Teacher" that but two numbers of the "Companion and Teacher" would be issued this year, but that all subscribers to the "Ontario Teacher," who had paid in advance, would receive the full number of issues for which they had paid. In accordance with this arrangement there was no October No., and only the numbers for November and December will be issued. But those who paid to December will receive the Nov., Dec., and Jan. Nos., and similarly in all other cases."

Club Rates.—There are so many different publications that it is almost impossible to get even a small club of any particular publication in many small towns, or even large ones. Our plan is this: We get a few hundred subscribers, here and there, all over the country, and upon the whole receive a very large list for most of the papers we place on our list. We, therefore, receive from the Publishers their very best terms, and can actually afford to give subscribers better terms than the publishers themselves. Another advantage to subscribers is, that when ordering three or four different periodicals, as many do, they have only got to write one letter if they order through us, and, besides, they save the postage and registration fee on two or three letters. We invite all to examine our list on fifth page of cover, and if satisfied with our rates, to order through us.

The Lakeside Library.—Many homes in America have been made cheerful by the introduction of a few or all of the numbers published of the "Lakeside Library," which, within the last two years, has attained an immense circulation and great popularity. The works of the best authors are reproduced at a trifling cost in unaltered form. We have been fortunate in making arrangements with the publishers whereby we can furnish any number of their publications as premiums to those who subscribe through us for any of the popular American or Canadian journals. If our readers will take the trouble to make our terms known to their friends, we shall be able to secure much larger lists for each paper, and can command and offer better rates for our next season. See terms on fifth page of cover, and subscribe early, as it takes a few weeks to fill orders.

Three Good Reasons — Why you should subscribe for the COMPANION AND TEACHER: 1st. It is printed in smaller type and contains a good deal more reading matter than the *Ontario Teacher*. 2nd. We give a handsome premium to each subscriber. 3rd. It is offered to subscribers for less money. We invite your co-operation on account of the unsurpassed liberality of our offer, and, likewise, from the merit and solid work of the publication itself, its freedom from all trashy reading, and avowed aim to improve, benefit and instruct. Now is the time to subscribe, letting your subscription date from the first number.

Specimen Copies. — Many Teachers will receive this number as a sample, and will please understand it as an invitation to subscribe. Teachers can create a good deal of interest among their pupils if they will get up a club and encourage them to take part in the competition for prizes in the Children's Department. Children like to see their names in print, and a healthy rivalry between schools is always a means of doing good. A club can be secured in any section by a little exertion. We give 20% off on a club of 20 subscribers, or for a club worth \$40.00 at our regular rates, we give a copy of Webster's New Unabridged Dictionary.

Our Premiums. — Our aim is to carry light and culture into every house in the land. Our mission is to present to the people that which is beautiful in art and nature. Every subscriber of the COMPANION AND TEACHER will receive one of our beautiful premiums as follows:
Crayons. — "The Offer," "Accepted," "Yes or No," "Love is as a Thread," "The Descent from the Cross," "Immaculate Conception."
Chromo. — "Lake Maggiore," "Babe of Bethlehem," "Isle of Man," "Isle of Wight," "Beatrice," and "Vestal Virgin."

Visiting Cards. — If any of our subscribers prefer not to have a Chromo, we will send in its place as a premium 100 Visiting Cards, neatly printed with name and address, or name alone, as preferred. We will not, however, bind ourselves to fill card orders in less than ten days after the order comes into our hands, as we are not always prepared to do the work. If any subscribers want both premiums, we will furnish the cards at 90 cents for 100, same as a chromo.

Lake Maggiore. — Elsewhere in this number we present a description of this our new premium Chromo, whose beauty will win for it a place in thousands of Canadian homes this winter. As it can speak for itself more effectually than we can describe it, we will only say that if any one who may subscribe for the COMPANION and receive this premium, is not satisfied with the same, we will, on receipt of the chromo, return him his money.

Commendatory. — We have not room in this issue to give place to even a few of the numerous commendatory notices with which the COMPANION AND TEACHER has been favored by the "press" in every part of Canada, as well as by Inspectors, Teachers and subscribers everywhere. We hope to be able to make the present and future issues of our paper still more worthy of their commendation.

Subscribe. — Many are making a mistake by waiting until New Year's before sending in their subscriptions. Our new volume began with last number, and unless otherwise instructed, we will date all subscriptions from the November number so that the volume may be complete in each subscriber's hands.

Renew. Renew. — A few hundred subscriptions expired with this number, and we hope all are sufficiently pleased with our paper to subscribe again. Don't wait until the next number is published. Renew at once, as on the 20th we revise our subscription list, and strike off all that have not done so.

When Subscriptions Expire. — The Nov. and Dec. numbers of this paper, as we already announced, will take the place of the three smaller numbers of "Our Home Companion," which would have been published had our enlargement not been made until New Years, as promised when all our old subscribers were taken. HOME COMPANION subscriptions will therefore expire at the same time they would have done had no enlargement been made until New Years. Not so, however, with the "Ontario Teacher" subscribers. Each subscription is dated forward one month. — Thus those which were to expire in March will now expire in April, and so on. We trust this will be intelligible and satisfactory to all.

Cheap Reading. — We know of no firm in Canada that is doing as much as ourselves to provide cheap reading for the people. We this month add a considerable number of the most popular weeklies published in Canada, and a glance at our CLUB LIST will show any one that we present an opportunity seldom equalled to procure the best literature of the day. We trust our readers will make our offer known to all their friends, and that we may be favored with a fair share of their patronage.

Index to Ontario Teacher. — We have prepared, and will present with this No. to the subscribers of the "Ontario Teacher," an index to Volume V, containing nine numbers, so that those who wish to have the same bound may do so. A "title page" also accompanies the index.

DETROIT COMMERCIAL ADVERTISER. — We invite particular attention to this periodical on our Club List, because on the 13th of this month (December) a distribution of \$12,500 will be made among 25,000 subscribers, or a proportionate amount if that number have not subscribed. The highest prize offered is \$1,000 in cash, and various sums down to \$1 will complete the amount. It is a paper we can recommend, and those who subscribe through us before the 10th inst., will for \$2 receive the paper free for one year, a premium ticket, and three numbers of the "Lakeside Library." These distributions have been made annually for 13 years, to the universal satisfaction of its subscribers.

PARTNER WANTED. — A teacher (or any gentleman of literary talent and active business requirements) may hear of a desirable partnership in a first-class paying business, where only a moderate investment of capital is required, by addressing "A. B. X." London P. O., Ontario; or care of COMPANION PUBLISHING COMPANY.