

Drawing Lessons for School Children

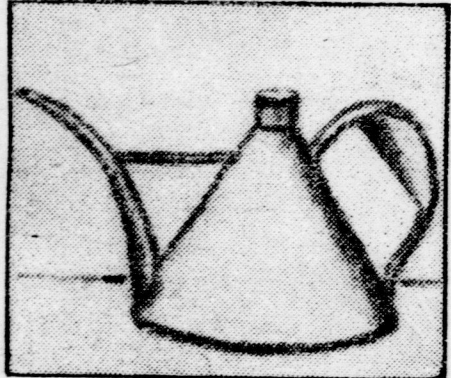
THE SIX BEST DRAWINGS.

- 1—MAUD PLEWES, Grade 8, Rectory street.
- 2—RONALD M. GRAY, Grade 7, St. George's.
- 3—GORDON SMALLMAN, Grade 7, Rectory street.
- 4—JOSEPH ROWNTREE, Grade 8, St. George's.
- 5—HELEN McMILLAN, Grade 8, Talbot street.
- 6—ETHEL J. ADAMS, Grade 7, Talbot street.

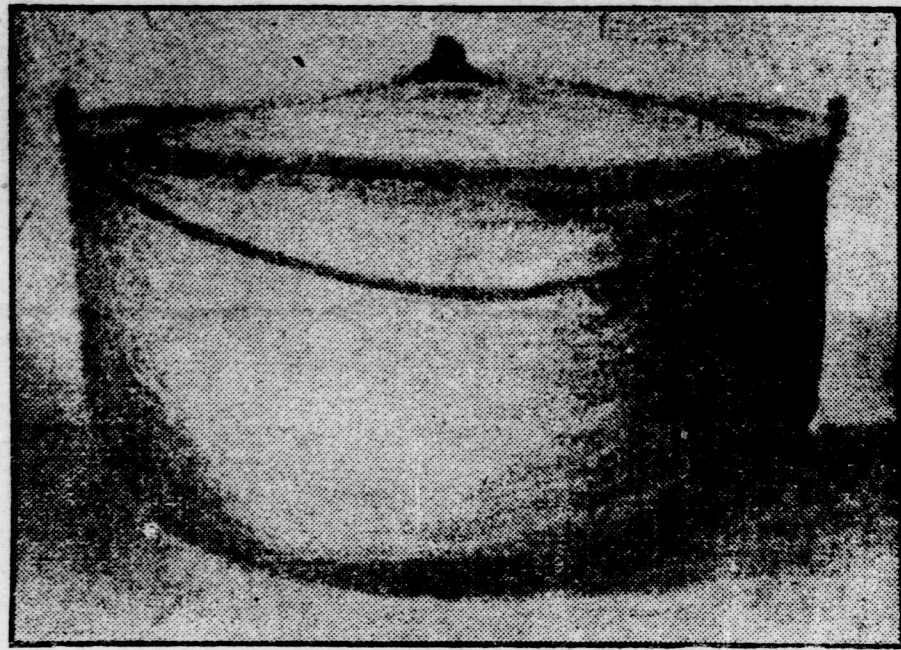
At a first glance, this week's drawings were a disappointment. You were really asked for a drawing in outline. Perhaps that was not made sufficiently plain. We are giving you the benefit of the doubt this time, because the drawings show great care and effort, and have been attended with considerable success, so much success that before long Grades VII and VIII may get a chance to make some pen and ink drawings, but not before they have handed in one good lesson in pure outline. You were not being given something "unworthy of your steel," at all, for a good accented outline is much more difficult than anything you have done yet.

However, it was clearly stated that the work was to be done in charcoal. Pencil drawings are not easily reproduced, and for the present they are out of the question.

It is to be regretted that the really excellent Simcoe street drawings had not been in this, the easiest and most delightful of all mediums. Of these pencil drawings, that of Milton Knowles deserves special mention.



4—Drawn by Joseph Rowntree, Grade 8, St. George's school. Fourth best drawing.



1—Drawn by Maud Plewes, Grade 8, Rectory street. Winner of first prize.

The choice of objects, upon the whole, was particularly good. One error we are prone to fall into is the considering certain things good in form just because they happen to be unusual. A man with a head half the size of his body would be very unusual-looking, but would you consider him fine-looking or an attractive subject for your brush? There was one teapot with a very awkward spout. Was it the one you chose? Then there was a well-drawn bottle with the word INK blazoned upon it in such a way that you saw it before you saw the bottle; and a teakettle where ERIE bestrode the lid, but in a slightly aggressive way.

Did you ever give a party and have some boy or girl you had invited take it upon himself or herself to do all the honors, and put you quite in the background? Was it pleasant? Will you ever invite the offender again?

It was the teakettle and the bottle's party. Will ERIE and INK ever be invited again? I hope not.

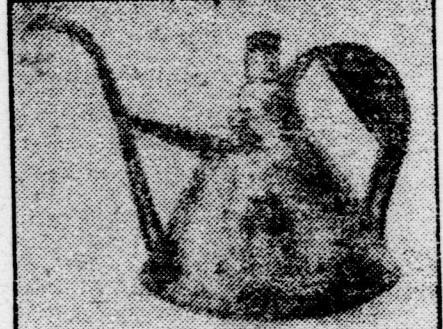
Lulu Brown, Rectory street school, handed in a very attractive drawing of an old-fashioned long-handled spider. The charcoal handling was splendid, but the drawing was not quite up to the standard.

Gordon Smallman's handling was very delicate and more pleasing than

his choice of model. Vera Shannon, Victoria school, shows a bold, effective style, but her drawing was badly placed and rather careless.

Had some of you used the rough right side of your paper you would have had less difficulty in getting your color on. The lessons would bear a more careful reading than some of you are giving them. Try to make the utmost use you can of them.

We use only one table line. When the object is below the eye it is the back line of the table. When the object is above the eye then we must draw the front edge, cutting off the base of the object. At no time do we use both unless the picture is of the table as



5—Drawn by Helen McMillan, Grade 8, Talbot street school. Fifth best drawing.



3—Drawn by Gordon Smallman, Grade 7, Rectory street. Winner of third prize.

well as the object. When the cast shadow is shown this line is not necessary, as it is drawn merely to give stability to the object, to show that it is resting on something, not floating in space.

Watch your ellipses. The ends must be rounded not pointed, and the further above and below the eye they are, the more nearly circular do they become. A hoop or ring held at the level of the eye will appear to be a straight line, but the further it is held above our eyes the rounder it will become till it appears to be a perfect circle. Allowed to slink gradually below our eyes it widens from front to back till again it appears to be a perfect circle. We forget this when we draw the top of a bottle or kettle, etc., an ellipse and the bottom a straight line. If the top is below the eye, the bottom must certainly be further below the eye, and should, therefore, appear more rounded in your sketch.

Do not forget to put your name in full, with the name of the school on your drawings. It is interesting to know the age, too, but that is not ab-

solutely necessary. However, as the drawings are sorted and examined two or three or more times, unless the school is on each drawing, some may be credited to the wrong school. The name of the school was forgotten on a number of the drawings from Grades VII and VIII.

Do not send in more than one drawing by each pupil.

If you have been awarded a prize



6—Drawn by Ethel J. Adams, Grade 7, Talbot street school. Sixth best drawing.



2—Drawn by Ronald M. Gray, Grade 7, St. George's school. Winner of second prize.

you may get a higher one at some subsequent time, but you may not take the same prize a second time. However, if your drawing is as good or better than the prize winner's you will be given full credit in the paper though you do not receive a prize.

The results in Grades I, II, and III, in the second series of lessons, will be announced on Saturday next.

The drawings for Grades IV, V, and VI, should be sent to this office not later than Monday next.

The sketches for Grades VII and VIII, should be in by May 20. The lesson appeared in the edition of April 27.

The third set of lessons will probably be published next Saturday.

Three prizes only are given every week.

THE ROLL OF HONOR

Drawings Thought Worthy of Special Mention by the Examiner.

Six Best in Grade VII.—Ronald M. Gray, St. George's; George Winterbottom, St. George's; Minnie Hodges, Princess avenue; Ethel J. Adams, Talbot street; Lionel Morley, Talbot street; Gordon Smallman, Rectory street.

Six Best in Grade VIII.—Milton Knowles, Simcoe street; Lulu Brown, Rectory street; Maud Plewes, Rec-

tory street; Helen McMillan, Talbot street; Amy McLeod, St. George's; Joe Rowntree, St. George's. Honorable Mention, Grade VIII.—Leona Emery, Victoria; Roy Campbell, Victoria; George Aitken, Victoria; Vera Shannon, Victoria; Leslie Cair, Colborne street; Howard Leggatt, Colborne street; V. McCracken, Colborne street; Douglas Ewen, Aberdeen; Lewisella Smith, Aberdeen; Anna Clarke, Simcoe street; Marjorie Tolhurst, Simcoe street; G. Greenside, Simcoe street; Harold Weekes, Simcoe street; Milton Knowles, Simcoe street; Ada Stewart, Talbot street; Helen Harvey, Talbot street; Norman Smith, Talbot street; F. H. Paul, Talbot street; W. Marsh, Rectory street; Lulu Brown, Rectory street; Harry Powell, Rectory street; Edna Smith, St. George's; Amy McLeod, St. George's.

Honorable Mention, Grade VII.—Nellie Mann, Princess avenue; Douglas Fetherston, Princess avenue; Minnie Hodges, Princess avenue; Roy McCarty, Princess avenue; Willie Reid, Aberdeen; Bertha Churchill, Aberdeen; Annie Middleton, Aberdeen; Ernest Risler, Aberdeen; Ross McIntyre, Colborne street; E. Harwood, Colborne street; Earle Thomson, Colborne street; Blanche Dewar, Talbot street; Lionel Morley, Talbot street; Myrtle Hicks, St. George's; Laura Stephenson, St. George's; Anna Edwards, St. George's; Lillian Watson, St. George's; Ivy Holland, St. George's; Gordon Walde, St. George's; Harold Mason, St. George's; George Winterbottom, St. George's; Wilmer Denney, Rectory street; Nevada Frost, Rectory street.

CHRONOLOGY OF INVENTIONS.

Barometers were first made by Torricelli in 1643.
Bombshells were first made in Holland, in 1495.
The first almanac was printed in Hungary in 1470.
The first patents were first laid in London, in 1517.
Buckles were first made in 1680.
Brandy was first made in France, in 1310.
Roller skates were invented by Plympton in 1863.
The first American paper money was made in 1740.
Covered carriages were first used in England in 1580.
Alcohol was discovered in the thirteenth century.
Stem-winding watches were the invention of Noel, in 1851.
The first iron wire was drawn at Nuremberg in 1351.
The torpedo was first made in 1777.
The first plaster cast was made by Verocchio in 1470.
Advertisements first appeared in newspapers in 1652.
The first horse railroad was built in 1826.
The folding envelope was first used in 1839.
Coal oil was first used as an illuminant in 1826.
The velocipede was invented by Dr. Williams in 1817.
Steel needles were first made in England in 1545.
Short-hand writing was the invention of Pitman in 1837.
Billiards were invented in France in 1471.
The first pipe organ was made by Archimedes in 220 B. C.
The first dictionary was made by the Chinese scholars in 1109 B. C.
The first pair of spectacles was made by an Italian in 1290.
The dinner fork was introduced into Italy in 1491 and into England in 1668.
The game of backgammon was invented by a Greek about 1224.
Glass mirrors were known in A. D. 23, but the art of making them was lost and not recovered until 1300 in Venice.

HOLE IN THE WATCH KEY.

"The queerest patent?" said the attorney. "Well, the queerest patent I know of was the patent of a hole."
"An old farmer out St. Louis way patented a hole, and what is more, he made a lot of money on it. Now, though, it isn't worth the paper it is written on."
"This farmer one morning in the dim past went to wind his big silver turnip and found the key stuck full of dirt. He tried to dig the dirt out with a pin. No go."
"Confound it," he said, "I'll fix you."
"And he drilled a hole in the key, and with a single breath blew out every bit of the dirt."
"He patented that hole. He built a factory, bought millions of keys and made holes for them. His plant turned out 2,500 holes a day."
"In fact, all the world used the farmer's watchkeys, which were the only kind that would keep clean, and the old fellow got rich."
"That, of course, was in the dim past. The hole factory is only running on half time now, for few persons today use any save the stem-winding or keyless watch."
—Minneapolis Journal.

Cork dust is extensively used for shipping and keeping grapes in many European grape centers.

GRAND OLD MAN OF SURGERY; LORD LISTER'S EIGHTIETH BIRTHDAY

proposal of International Celebration—The Discovery of Antiseptic Surgery and Its Benefit to Humanity—New Era in Life-Saving.

An eminent scientist, speaking of the history of surgery, said that it might be divided into two periods: before and after Lister. It is in recognition of this fact that the great surgeons of the world are proposing to commemorate the eightieth birthday of Lord Lister, which occurred on April 5, by the republication of all his scientific studies. These studies began more than 50 years ago, with an investigation into the structure of the iris of the eye, and contain many discoveries that have proved of value to the world, but the ones which revolutionized surgery were the invention first of antiseptic and then of aseptic surgery.

Lord Lister inherited from his father a fondness for study. The father, Joseph Jackson Lister, a retired wine merchant of Quaker antecedents, devoted his wealth and leisure to improvements in the microscope. He discovered a practical method of making achromatic lenses, and made such important changes in the frame of the microscope and in the method of using it that the son says of him in the National Dictionary of Biography that he was the founder of modern microscopy. The son, named Joseph for his father, went up to Edinburgh as a medical student after receiving his bachelor's degree from University College, London. He was armed with a letter of introduction to the professor of clinical surgery, and the intimacy begun in that way led to his marriage with the professor's daughter, and to his following along the same lines until he succeeded his father-in-law in the chair.

Lister had published important studies on inflammation and on the coagulation of the blood before he became regius professor of surgery in Glasgow. At that time 80 per cent of surgical operations were followed by gangrene, and sometimes all the patients operated upon were successively affected by blood poisoning without any surgeon suspecting that his own instruments carried the infection. In those days surgical instruments were often used interchangeably without cleansing. As a result of Pasteur's studies into the nature of fermentation and of micro-organisms, Lister came to the conclusion that blood poisoning in surgical operations was due to the presence of living organisms, and that if those already in the wound could be killed and the entrance of others prevented the wound would heal. This is hard to realize that it was revolutionary and greeted with derision and bitter opposition of the principle were,

in the words of a great German physician, simply astounding. Within two years gangrene was abolished, the percentage of cases without it rising from 20 to 100.

At the first a great use was made of carbolic acid, and care was taken to exclude the air. The carbolic spray and the gauze dressing covered with an impervious outer coating were the chief factors. The thought was antiseptic, the destruction of the germs of decay. But presently Lister, always seeking new truth, came to regard asepsis, the exclusion of the germs of decay, as equally feasible. Absolute cleanliness, as demanded by carbolic acid and similar agents, might result in the destruction of germs already introduced into the wound, but in the case of original surgical operations the introduction of germs, far from being inevitable, was due, he discovered, exclusively to carelessness. By carbolic acid and similar agents, might result in the destruction of germs already introduced into the wound, but in the case of original surgical operations the introduction of germs, far from being inevitable, was due, he discovered, exclusively to carelessness.

In the later developments of Lister's treatment sterilization of instruments and bandages by dry heat or by steam and a washing of exposed tissues by pure water have been found even more effective than a reliance upon antiseptic washes. The controlling principle remains the same: keep out the poison germ or destroy it. It was in 1890 that Lister proved that infection can never come from the air. Dressings of gauze and cotton which permit the air to reach the wound, but strain out the impurities, are better than the same cloth kept out the impurities and the air also. Keep a wound open and clean and nature will heal it. It is the summary of his teaching. But the whole emphasis comes in the definition of clean.

In 1869 Lister became professor of clinical surgery at Edinburgh. In 1877 he was appointed to the same chair at King's College, London. In 1883 he was created a baronet. In 1895 he became president of the Royal Society, in 1896 president of the British Association, in 1897 he was created baron. These tokens of esteem at home have been equaled abroad. Perhaps the most striking evidence of his rank in his profession is the fact that one of the two medallions which adorn the facade of the principal hospital at Rome represents Lister dressing a wound. His Metropolitan, Behring and Koch, scientists, and have thus as great importance for pathology as for surgery. He has given his name to many improved surgical operations, some of which, like the stitching together of a broken patella with wire, would have been impossible but for his discovery of aseptic surgery.

Lord Lister has always been an out-of-door man. He has gathered one of the finest botanical collections in Europe and is said to know the call or note of every bird in Great Britain. He has, thus, in spite of his application to his profession, retained his health and lived to a green old age. He

considers himself fortunate to have been the instrument of the relief of millions of sufferers, and no false modesty has blinded him to the importance of his work. A comparison of the record of the field hospitals of the crimean war or the American civil war with the record of the Japanese service in the recent war with Russia is an impressive testimonial of the revolution he wrought in surgery, but the records of hospitals in time of peace show an even more wonderful advance in the range of operations possible, the percentage of successes, and in the prolongation of human life. The whole civilized world is the debtor of this grand old man.—Chicago Tribune.

THE DRIVING POWER OF A GREAT STEAMER

WOULD DRAW A FREIGHT TRAIN FIVE MILES LONG.

One of the most impressive manifestations of the power of the modern steam engine is the sight of an up-to-date freight locomotive starting a train of 40 or 50 cars, and gathering way, until the whole mass is thundering over the rails at a speed of 25 or 30 miles an hour. When we attempt to do this, we understand very well what is meant by mass and inertia. To move a single loaded freight car on the level by human power it is necessary to crowd around it as many men as can lay their hands or shoulders against it, in a united propulsive effort. And hence, when we see not one, but 40 or 50 loaded cars, started from rest and swung into their full stride by a single locomotive, the latter becomes symbolical in the popular mind of majestic power.

It is for this reason that to represent the horsepower which will be necessary to drive the new Cunard liners at 24 knots an hour, we have taken the average-sized freight locomotive as our unit of comparison. The least amount of power which is in these bold beasts of burden is represented by the fact that a single locomotive of this class, at their contract speed of 60.000-horsepower. Now, the horsepower of the average freight locomotive is about 2,100, and, consequently, the total thrust on the four propellers of each of these ships will be equal to the total pull exerted by 32 modern American freight engines. One of these locomotives could haul on the level a train of 50 cars, whose total length would be just a third of a mile. Consequently the whole 60,000-horsepower of the Cunarders, expressed in terms of locomotive work, would be sufficient to haul a train of 1,600 cars, whose total length would be over five miles.

To develop a minimum of 60,000-horsepower, and a maximum that will possibly run up to 75,000 or 80,000-horsepower, calls for a boiler and engine plant of truly fantastic proportions. Steam will be supplied by 25 cylindrical furnaces, of which 23 are double-ended, and two single-ended, in former being 17 feet 3 inches in diameter and 21 feet long. The coal will be burned in these boilers at a fierce white heat, a square measuring 64 feet on each side, containing about 4,000 square feet of surface, and an army of several hundred firemen will be continuously shoveling coal into these furnaces, where it will be burned at the rate of about 1,000 tons every 24 hours; and to insure that the coal is burned at a fierce white heat, the air will be forced through the grate continuously by means of powerful electrically-driven fans, the rush of air being assisted by the four great smoke-combustion will be discharged high up in the air, at about 150 feet above the level of the grate bars.—Scientific American.

MAN OF SHOCKS IS W. T. STEAD

"AN ELECTRIC DYNAMO IN CLOTHES," DESCRIBES HIM.

Good for a Shocker Every 24 Hours—His Irrepressible Energy.

New York Sun: Why did William T. Stead, the international pilgrim of peace, shock the Methodists by telling them that nobody cared a damn for their "Amen's" unless they did something in the cause of peace, which Mr. Stead is personally conducting? Why did he pray at the Broadway Tabernacle, when neither the rabbi nor priest, nor the Methodist minister, nor the Christian organization, declaring that the church had no more influence upon peace than a row of pins, and swearing he was sick of peace congresses? The answer to this and all similar questions affecting William T. Stead is that it is his nature to, as well as his habit to.

Consider a few of the things the man has done. Mr. Stead went to Chicago to see the world's fair, found it dull and wrote "If Christ Came to Chicago," which, as he had anticipated, made a million hits. He has, or had, conducted "for several years a series of experiments of automatic writing with friends in various parts of the world," and written voluminously about them. He revived British naval supremacy by writing the "Truth About the Navy and Its Fighting Stations," for Mr. Stead, like Mr. Roosevelt, deeply loves a fighter. He discovered Paris and wrote a quick seller about it. He did Berlin and St. Petersburg in the same slashing style. He wrote "Shall I Slay My Brother Boer?" and tumultuously edited the weekly organ of the Stop the War Committee during the struggle.

Mr. Stead has interviewed all the great ones of the earth, some of them several times. Emperors, kings, potentates and popes all look alike to him. Whether they relish it or not, as in the case of Leopold of Belgium, who didn't relish it, they have to submit. As modest and retiring a man as Chinese Gordon talked like a rapid-fire gun when Mr. Stead cornered him. The Czar of Russia, as shy as a woodcock at the end of the open season, can never stop talking in his presence. Emperor William puts Von Bismarck in the breach when Mr. Stead bursts into Berlin heralded for a week by press notices about his plans for disarmament and the regeneration of mankind. But diplomats are small fry to Mr. Stead; they simply infect the capitals of Europe when he travels, and he lets them have a few minutes of his time apiece. Of course, he startles them out of their wonted calm, but he startles or shocks everybody. If it had ever occurred to him he would have interviewed the Dalai Lama in his sanctuary on Mount Everest and shaken him up with home truths about Buddha.

Mr. Stead has been called by one admirer "the incarnation of eccentricity," and by another "an electric dynamo in

clothes." He is the only man President Roosevelt has ever had to listen to. Mr. Stead will not be interrupted by anybody on earth, and his output is 700 words a minute, except when he is pressed for time, when it is uncountable. We must get used to Mr. Stead; he is good for a shocker of some kind every 24 hours. He is the apostle of the unexpected, which he studies all the time. As the Bernard Shaw of agitators he cannot afford to be caught napping. The National Arbitration and Peace Congress in this city is probably one of the opportunities for a gifted opportunist and impromptuist like Mr. Stead. There is no knowing what he will say or do. He doesn't know himself. Of course, the greater is behind—the Hague Conference. If allowed to mobilize hands of peace pilgrims in the various European capitals and lead them up to the doors of the tribunal, as Coxey led his army to Washington, the crowning triumph of Mr. Stead's career will be at hand. The Hague Conference would probably be no more potent to resist him than was Chinese Gordon, or the King of the Belgians, or the wretched Czar. Trust William T. Stead to spring the sensation of his life at The Hague. The great conundrum provoked by his mercurial manner, presence anywhere is, What will he do next?

NO MORE GAS AT DENTISTS.

Chloroform, ether, cocaine and other compounds used to produce anaesthesia by dentists and surgeons have apparently seen their day. If a French doctor is to be believed, all these anaesthetics will hereafter be replaced by blue light.

It is now proved that by directing the ray of a blue electric light on the eyes, excluding carefully every other ray, patients can be thrown into a deep sleep and state of insensibility without not only perfectly harmless, but a positive pleasure. The sleep lasts two or three minutes, but is generally sufficient to have a tooth drawn.

This is good news for all dental sufferers of the future but, what is better still, it appears that blue lights, combined with blue hangings, furniture, carpet and so on in a room? is wonderfully exhilarating, and a positive cure for certain persons afflicted with nervous trouble. It quiets the nerves immediately and plunges a person into a pleasant slumber, after which all nervous trouble disappears. The inventor recommends not only blue electric lights, but blue glass windows, which have a marvelous soothing effect on certain temperaments.

THE OTHER WAY.

If you were a German boy living in some old village over in Germany and if you should discover that the house next door was on fire, you wouldn't grab for your cap, fall over chairs and rush out to yell "fire!" and turn in an alarm. If you did you'd be arrested. You would wait until certain that there was a fire, and then you would walk slowly out, ring the bell of the house, and when the good wife came to the door to see what was wanted you would take off your cap to her and say:

"I beg your pardon, Mrs. Schneider, for disturbing you, but the fact is that your house is on fire and will be burned down if you don't do something."