

FARM GARDEN.

AN EFFECTIVE, CHEAP BRAKE.

A writer in Farm and Home says: "I took a short piece of cable chain just long enough to go around an ordinary wagon shoe twice as in Fig. 1 and put it around the shoe once in front and once behind the front clip at the points A and B, 2 1/2 representing the clips as shown in Fig. 5. The chain is crossed on the bottom. The wagon shoe is made from a piece of iron about 2 ft long 3/4 in. thick and 2 1/2 in. wide. One end is hammered down to a tapering point as in Fig. 2 so as to make it 2 3/8 or 3/4 in. long. It is then bent in the shape of Fig. 1 and a hole made in the small end and a ring put in at A. Two clips 2 1/2 in. wide as in Fig. 5 are riveted on about 10 in. apart and the shoe is completed as shown in Fig. 1 the clips being made of 1/2 in. iron drilled and an ordinary spur is riveted in, projecting about 1 in. for toy roads. This falls to hold much and soon wears off. A better plan is to take a piece of cable chain put it behind the clip at A, cross it on the bottom and put in front of clip B and return to the rear clip closing with a cold shut link. On the bottom it will appear as in Fig. 6. Last winter I used a short piece of chain simply put around the shoe between the clips as in Fig. 4. This worked nicely, but would not hold back as much as the chain closed. Fig. 8 shows the shoe in place under the wagon. It is put under by putting the shoe in front of the wheel and drawing the wagon into it. It is held in place by a chain running to the front axle. The space between the uprights on the clips, should



fitting up his pump platform in a convenient way, as seen in the engraving. A galvanized iron pan fifteen inches across and eight inches deep, of a semi-circular shape so as to fit snugly against the pump, with an inch pipe to convey the water, is placed directly under the spout. Into this pan all the drippings and water that slops over fall, and are conveyed by the pipe to a flower garden where the ground is irrigated, by filling a small trough into which the pipe empties to save the supply for the ditches. Behind the pump a trap-door, fitted with strap hinges and a hasp, staple and padlock, opens into a convenient receptacle in which butter, cream, vegetables to be warmed over, and meats can be kept quite as well as in a refrigerator, and without the expense of fuel. The platform is made of framework of two by six joists, with a floor of matched flooring nailed on both sides, the intervening space being filled with clean sawdust. This keeps out frost in winter and heat in summer, and with the provision for carrying off the drippings, it is always clean and healthful.

Preserving Eggs. Fanny Field, a noted poultry fancier of great experience says that she has "tried all the egg-preserving recipes that I ever heard of, and some that I made up out of my own head." I have turned eggs, I have tried the sulphur method, and the salicylic acid method; I have packed them in salt, bran, oats, corn meal, coal ashes, earth, sand, melted lard and sawdust; I have varnished them, coated them with vasoline, melted wax, gum arabic and other things to close the pores of the shells; I have kept them in a cold room in an ice house, and in cellars where the temperature was "various," and I have turned the packages over every day, every other day, twice a week, and not at all. All this and more have I done, and up to date I have not found any better method than that of simply packing in perfectly dry salt. I pack in anything that is clean and handy—boxes, jars, kegs, tubs, pails and barrels. Only fresh, clean, whole-shelled eggs are used. First the bottom of the package is covered with about three inches of salt on this the eggs are placed, on end, just far apart enough not to touch each other or the sides of the packages; then the layer is entirely covered with salt, and another layer of eggs is put in, and so on until the package is full. The packages are kept in the coolest place at command, and are not turned, for we have found out by trying both ways that when the eggs are placed on end, as they should be, the turning the packages over every few days is not only useless work, but actually injurious.

Eggs thus packed and kept in a dry cellar where the temperature ranged from 50 to 60 degrees kept good between six and seven months. Mind you, I don't say they were equal to fresh laid eggs, but they were good. The whites were not so firm as in fresh eggs, but the yolks were whole, had not stuck to the shell, and beat up light, though not so frothy as fresh eggs. Eggs that were coated with vasoline, wax, and other things kept no better (some of them not so well) than those that were packed without any previous preparation. I have kept eggs good for fourteen weeks—from the first of July to the second week in October—by just setting them on end in racks made for the purpose, and keeping the racks in a cellar where the temperature rarely went above 55 degrees.

"If you want to pack eggs for home use, or for market, you need not fear to pack all you can get in salt; provided you pack as I told you—use only fresh, clean, uncracked eggs; keep in a dry cellar where the temperature will not go much above 60 degrees, and do not shake the eggs up by turning the packages over 'every second day.' If your cellar is a little inclined to dampness at times, set your packages up from the cellar bottom. We use coarse fine salt, and the same salt is used year after year. Don't hold preserved eggs too long. It is, generally speaking, better to sell in November and December than to wait longer. After the first of January the prices of preserved eggs go down, as fresh eggs come into market in greater number. If you pack eggs for market, don't dangle yourself into the belief that you can get the price paid for 'strictly fresh' eggs. The best preserved eggs are not as good as fresh laid, and will not bring as good prices. If you want to get the very top price for eggs next winter, have pullets of a laying age, and then take care of them so that they will lay. Save for the experiment, we do not now preserve eggs on our ranch. We manage the hens so that they get in the heat of their work when eggs bring the highest price."

Home-Made Feed Rack. This rack is 10 feet long, 3 1/2 feet high, and 3 feet 4 inches wide. It is open at top and has no bottom in it. It is boarded up 20 inches from the bottom on all four sides, marked A. All the other boards

are 6x1 fencing. All the spaces marked B are through which the cattle reach to eat, the feed being thrown inside. Hook it together with hooks and staples at each corner, above and below. Use wrought nails and clinch on the inside. Stock cannot run over and waste the feed such as hay, fodder, etc.

Comfortable Shelter. Look over the barn and stables, if you have not already done so, and make sure that everything is in shape to minister to the comfort of your animals for the winter. If you wait until the coldest weather comes, such work is quite likely to be poorly done. It is always a good plan to do all the work possible in advance of the season, when it can be done without hurry, and before the demand for it becomes pressing.

A sponge dampened and sown with oats or some kind of grass seed, soon becomes an interesting object. Suspend it from the ceiling of a room, the bright-green moss is cheering in the winter season.

It is better to be a has-been than a might-have-been.

MORTICULTURAL NOTES.

Phosphoric acid is the second important fertilizer to be applied artificially to orchards. Of the plant superphosphates from 80 to 500 pounds may be applied to the acre. The practice of inexperienced persons of repeatedly wetting the upper surface of the soil (especially of plants in peaty soil) has the disadvantage that the lower portion of the soil remains dry, while the surface and the base of the stems become covered with moss. The above rule is especially important in the case of tough-leaved plants, which do not require much moisture.

In olden times farmers used to ornament their hills of cucumbers and squashes with stalks of the wild indigo gathered in the pasture and stuck down in the hill to keep off the striped bug. Tansy was also used as a bug repellent for certain insects, mostly for the cabbage moth and the turnip fly, if we remember rightly. If they were efficacious in that way why would not a decoction of them steeped and sprinkled upon the plants drive away these pests? Fortunately there are a few pears which, when gathered from the trees when about full grown, although they may be a month from their natural time of maturity, will still ripen well if gathered before their natural time. One of these is the Bartlett. The natural time is the beginning or middle of September, but if taken from the trees at the beginning or the middle of August, or the month before the natural ripening, and placed in a dark apartment or cellar, they will ripen in a few days and be very nearly as good quality as if left on the tree for the full, natural term. There are probably other varieties of pears that would do this, and a list of them would be very useful to fruit-growers.

Shade is a great benefit to red raspberries in a warm climate. Gooseberries are often blighted by the sun and fall to the ground before ripe. Mildew to a certain extent is checked by shade and a heavy mulch. The English varieties succeed best when slightly shaded. I know this by experience. For a number of years the industry mildew badly, so that the fruit was worthless. I was about to dig them up. Last spring I mulched with coarse manure. The weather was almost continuously rainy and cloudy until the berries were half-grown. The result was no mildew and a fine crop of smooth fruit. We are now associated with mildew with damp weather. It is the hot sun following, with little air, that produces bad results. If the bushes could be dried by the air before the hot sun shines on them, there would be less mildew.

Sweet Peas. There are many old-time favorites among flowers which will never lose their popularity. The sweet peas blossomed in our grandmothers' gardens, and were ranked among the most beautiful of the annuals for out flower purposes, even as they are to-day.

For buttonhole bouquets, for corsage worn with lawn dresses, and for a loving token to be laid beside a plate at the breakfast table, there is no more favorite flower than the sweet pea. It makes a charming hedge or screen to be placed before a window which com-



mands some unsightly prospect. The seeds should be sown so that the plants will stand about two inches apart, and they must be covered to a depth of half an inch. If deeper than this, they will be likely to rot.

When the plants are up, hoe the ground about them, drawing the earth towards the plants in order to protect their roots from the sun, which is necessary for their growth, is to injure them if they are too near the surface, and thus shorten their blooming period. Support of some kind must then be given them, either with strings, wires, trellis or poles.

About the first of June it is well to apply a mulch of coarse straw or dung to the roots as they are likely to extend, which will assist in keeping them moist.

Some of the new large-flowered varieties are magnificent in size and color. Much attention has been bestowed during the last few years on this plant, and there are many rich shades and variegations. The seeds of these are more expensive than those usually sold in the average mixture, but they are well worth the additional cost. The following are some of the most desirable varieties: Queen of England, Vesuvius, Grand Blue, Princess of Wales, Duchess of Edinburgh.

Gloire de Dijon Rose. Travellers from the South and from Call furnish tall of the wondrous beauty of the roses climbing about the dwellings there; and well we can imagine the lovely picture the blossoms must present when the plants are in bloom. It is the custom to speak as if the beautiful spectacle could not be produced here, and it is true that it cannot be to the same extent, but in these parts there is at least one good climbing rose, hardy, everblooming and fragrant, the Gloire de Dijon. It is a wondrously pretty rose, and it can be nothing but that; but few know of its hardy character, that makes it so seldom used in cultivation and still more seldom used for climbing purposes. It belongs to the rose roses, known universally for their fragrance. In color it is a combination of salmon, yellow and white, and like all tea roses, it is rarely out of flower. Many constant blooming roses, such as Sombreuil, Archduke, Charles Malmaison and Homer can be grown to trellises as part climbers, but the Gloire de Dijon is a true climber and what is more in one of the hardest of the class. When planted in places where the wood becomes well ripened in the fall, it passes through the winter well, though in this city no matter where set it thrives very well. Yet, it will bloom more constantly and profusely if given a sunny situation.

Seeds of walnuts and hickories can be kept in a damp cellar all winter, and sown in the spring, when they will do better than when sown in fall. The pecan nut can be successfully grown about Philadelphia.

THE SUNDAY SCHOOL.

LESSON VI, THIRD QUARTER, INTERNATIONAL SERIES, AUG. 11.

Text of the Lesson, Num. xxi, 4-9.—Memory Verses, 8, 9.—Golden Text, John iii, 14.—Commentary by the Rev. D. M. Stearns.

4. "And they journeyed from Mount Hor by the way of the Red sea, to compass the land of Edom, and the soul of the people was much discouraged because of the way." Edom was Esau, Jacob's brother. So the Edomites were near kinsmen of Israel, according to the flesh. Yet they refused to allow Israel to pass through their land, although Israel offered to pay for the water they might use while passing through (xx, 18-21). In the previous chapter we have also an account of the death of Miriam in the first month, and the death of Aaron in the fifth month of the fortieth year. See chapter xxxiii, 38. We find Israel in this lesson about where we saw them in the last lesson, but it is 38 years later in the story. Hundreds of thousands have died in the wilderness, and a new generation has grown up, yet of those 83 years of wanderings because of their unbelief we know scarcely anything. They were out of fellowship, and it was lost time. We are reminded of the 13 years of Abram's life of which we know nothing (Gen. xvi, 16; xvii, 1), and of the lost time of the Nazarene (Num. vi, 13). When we are out of fellowship with God through unbelief or worldliness, the time is lost. We are reminded that the journey of life is often a weary one to the flesh, but if we are in Christ, who is "the way" (John xiv, 6), and will continually consider the Lord as "looking unto Him" (Heb. xii, 2, 3), we will be greatly helped and strengthened and will not be discouraged, even though our own relations turn against us. Think of the brother of Abel, the brethren of Joseph and of David, and even the brethren of Jesus did not at one time believe in Him (John vi, 66).

5. "And the people spake against God and against Moses, Wherefore have ye brought us up out of Egypt to die in the wilderness? for there is no bread, neither is there any water, and our soul loatheth this light bread." Ps. lxxviii tells the story of their sin from beginning to end. In Dent. ix, 24, Moses says, "Ye have been rebellious against the Lord from the day that I knew you." In Num. xi, 1, it is written that "when the people complained, it displeased the Lord." And in Ps. xcv, 10, the Lord Himself says "Forty years long was I grieved with this generation." What a relief to turn to Him of whom it is said by the Father, "This is My Beloved Son, in whom I am well pleased," and to hear the Son Himself say, "I do always those things that please Him" (Math. xvii, 5; John viii, 29). The Word for us is, "Do all things without murmuring or disputings." "Be content with such things as ye have" (Phil. ii, 1-4; Heb. xiii, 5; see also 1 Cor. x, 6-10).

6. "And the Lord sent fiery serpents among the people, and they bit the people and many people of Israel died." In James iii, 8, it is said that the tongue is an unruly evil full of deadly poison, and of sinners it is said in Rom. iii, 13, "The poison of asps is under their lips." The people had been wandering in the wilderness with their tongues and now they are reaping as they sowed. They sowed the wind and they are reaping the whirlwind (Gal. vi, 7; Hos. viii, 7). Sometimes a swift reckoning overtakes the sinner, as in the case of Korah and his company, Achan also, and Ananias and Sapphira, but it is always preceded by much long suffering and patient forbearance, as in the days of Noah. "He that being often reproved, hardeneth his neck, shall suddenly be destroyed and that without remedy" (Prov. xxix, 1). "Because there is wrath, beware lest he take thee away with his stroke; then a great ransom cannot deliver thee" (Job. xxxvi, 13).

7. "Therefore the people came to Moses and said, We have sinned, for we have spoken against the Lord and against thee, Pray unto the Lord that He take away the serpents from us. And Moses prayed for the people." In Ps. cvii we read again and again that they cried unto the Lord in trouble, and He heard and delivered them. He is full of compassion and forgiveness, and for us it is written that "if we confess our sins, He is faithful and just to forgive us our sins and to cleanse us from all unrighteousness" (1 John i, 9). There is a better way to live, however, than that of constant sinning and repenting. Let us never walk in the light as He is in the light, have fellowship with Him and rejoice in the blood that cleanseth from all sin (1 John i, 7). We shall never on this side of the glory cease to need that cleansing blood, but we may have wonderful victory over sin and fellowship with God.

8. "And the Lord said unto Moses, Make thee a fiery serpent and set it upon a pole, and it shall come to pass that every one that is bitten when he looketh upon it shall live." How strange the remedy, a likeness of that which slew them! How suggestive of the Lord Jesus, who took upon Him our likeness, the likeness of sinful flesh, and was made sin for us (Rom. viii, 3; 1 Cor. v, 31). The serpent brought death, and the likeness of the serpent brought life. By Adam came sin and death and the curse. By the Son of God, in the likeness of Adam came a curse for us, come life and health and peace (Rom. v, 12, 17; Gal. iii, 13). How simple the way of life! Though all but dead from the serpent's bite, if but the glazing eye could see the brazen serpent there was life.

9. "And Moses made a serpent of brass and put it upon a pole, and it came to pass that if a serpent had bitten any man, when he beheld the serpent of brass, he lived." In John iii, 14, 15, see the Saviour's application of this to Himself. Write your own name in full in John iii, 16, instead of the words "the world" and "whosoever," and believe that God means you, and the believing look upon Him who died for you, in the light of John i, 12, will surely bring you life.

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Discriminating Wisdom. A correspondent thinks he has discovered a discrepancy in the Bible because one verse says, "Answer a fool according to his folly lest he be wise in his own conceit," while another verse says, "Answer not a fool according to his folly lest thou also be like unto him."—Allaby Times-Union.

MICROSCOPIC WRITING.

Marvelous Specimen in Medical Museum at Washington.

Among the collection of microscopic objects in the United States Army Medical Museum at Washington is a specimen of microscopic writing on glass, which contains the Lord's Prayer, written in characters so small that the entire 227 letters of that petition are engraved within an area measuring 1-294 by 1-441 of an inch. So far as I know, we go a little further, we easily find that the area having the above dimensions would be only the 1-129,554th of a square inch, and, consequently, that an inch square covered with writing of the same size, or, counting 227 letters to each such fraction, would contain 29,431,455 letters. Let us put this figure into a concrete form by seeing how much of a book this number of letters would represent. The Bible is a book of which we may safely assume that everyone has an approximate idea as regards its general size or extent. Someone has actually determined the number of letters contained in the entire Old and New Testaments, and finds this to be 3,566,380. Hence, the number of letters which a square inch of glass would accommodate, written out like the text of the Lord's Prayer on this strip of glass, is more than eight times this last number, or, in other words, a square inch of glass would accommodate the entire text of the Bible eight times over, written out as is the Lord's Prayer on this strip of glass.

I am free to confess that though this fact has been known to me since 1873, and I have had in my possession photographs taken with the microscope of this writing, I cannot say that I fully apprehend or mentally grasp the fact just stated. I can form on mental picture of a square inch of glass with the text of eight Bibles engraved upon it, and yet, when I have verified the measurements and calculations leading up to this conclusion, I feel absolutely certain as to its truth, not as the result of intuition, but as a deduction from experience, which has not yet developed into an intuitive consciousness.—Dr. Henry Morton, in Cassier's Magazine for August.

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Rev. James Murdock, of St. John, N. B.: "I have used South American Kidney Cure with marked success. It will cure all the ailments which claim for it. I felt much benefited after taking the remedy but a couple of days. I have taken in all four bottles, and consider that I have received \$100 worth of good from each bottle."

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ON THE 17th ult. The Bank of Scotland attained its 200th anniversary, and in honor of the event the Scottish Lion was hoisted on the principal office in Edinburgh.

FILES: Files: Itching Piles; SYMPTOMS: Moisture, intense itching, stinging, mostly at night; worse by scratching. If allowed to continue tumors form, which often bleed and ulcerate, becoming very sore. Swayne's Catarrh cures the itching, and cleanses, heals ulceration, and in most cases removes the tumors. Druggists, or by mail, for 50 cents. Dr. Swayne & Son, Philadelphia, Lyman, Sons & Co., Montreal, wholesale agents.

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