

HOME COURSE IN FRUITS AND BERRIES

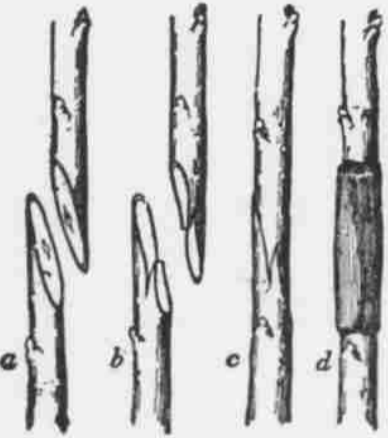
II — GRAFTING APPLE TREES AND LOCATING AN ORCHARD.

By G. B. BRACKETT, Pomologist, Bureau of Plant Industry, United States Department of Agriculture.

APPLE grafting, unlike budding, is usually performed during the dormant period of growth. It is accomplished by carefully fitting a small dormant twig or scion of the variety we wish to propagate into a cut in a stock or seedling tree which we wish to change. There are several forms of grafting, but they differ more in method than in results. In fact, so far as the top of the tree is concerned, the results are the same in all cases whether we bud or graft. The object sought is to change an undesirable or uncertain tree into one which we know will produce a variety whose fruit will possess certain desirable characteristics.

Splice Grafting.

Splice grafting is a simple form and is used when the stock and scion are very nearly the same size. It consists



SUCCESSIVE STEPS OF STOCK GRAFTING. (a, splice graft; b, tongue graft, parts separate; c, tongue graft, parts united; d, waxed wrapper applied.)

In splicing or lapping the scion on the stock by scarfing each at the same angle. When a close joint is secured the parts are held in place by means of some kind of wrapping material.

Tongue grafting differs from splice grafting in that both scion and stock are split at corresponding points on the scarf with a thin bladed knife so as to form tongues. The object of this is to unite more firmly the two portions and present a larger surface for the effusion of cell tissue and to promote the caulousing process. This is the method commonly practiced by nurserymen under the name of root grafting.

In root grafting thirty one-year-old stocks grown from seed are taken up in the fall and stored in a cellar or buried in the soil, where they will keep fresh and be accessible at any time in winter when wanted. The scions having been secured in the fall, the work of grafting may be performed at any time during the winter. The roots only are used in this method, and they may be cut in two or more sections, according to their size and length or the desire of the propagator. But the larger or stronger roots, as a rule, may be relied upon for the most satisfactory results.

Foreign Methods.

In the foregoing methods of grafting, but especially in the first, the parts must be held together by some kind of bandage or tie. This may be made of thin cotton cloth or tough manila paper spread with melted grafting wax and when cool cut or torn in narrow strips of convenient width for wrapping. But the most common method now practiced is to employ cotton yarn drawn through melted wax and wound upon a spool, from which it is used when wanted.

These root grafts, after having been tied in bundles with each variety separately labeled, may be packed away in moist earth or loam and left in a cellar free from frost until spring.

NO REASON FOR IT.

You Are Shown a Way Out.

There can be no reason why any reader of this who suffers the tortures of an aching back, the annoyance of urinary disorders, the pains and dangers of kidney ills will fail to heed the word of a resident of this locality who has found relief. The following is convincing proof: F. A. Sutton, Hoyt and West Sts., Salem, Oregon, says: "For ten or twelve years kidney trouble was the plague of my life. I suffered intensely from pain in the small of my back and was often unable to move. I doctored and tried a number of remedies but to no avail, and I was in a bad way when I used Doan's Kidney Pills. They benefited me at once and after I had taken the contents of three boxes, I was free from every symptom of kidney complaint. My health is now of the best and for that reason I cannot recommend Doan's Kidney Pills too highly." (Statement given January 31, 1904.)

Re-Endorsement.

Recently Mr. Sutton said: "I willingly confirm all that I have previously said in favor of Doan's Kidney Pills. This remedy cured me three years ago and I have had no return attack of kidney trouble."

For sale by all dealers. Price 50 cents. Foster-Milburn Co., Buffalo, New York, sole agents for the United States. Remember the name—Doan's—and take no other.

Cupid Catches Ex-King Manuel; He'll Wed Relative of Kaiser



Photo by American Press Association.

THE revolutionists of Portugal did not catch King Manuel, but Dan Cupid did. Now the ex-ruler is engaged to Princess Augustina Victoria of Hohenzollern, a distant relative of the Kaiser. Just after the announcement a lively controversy started in Berlin on the question whether the princess is to be called queen. Some of the German experts on court questions declare that she will rank only as a duchess, with the title of royal highness, while others assert that as Manuel has not recognized his deposition from the throne of Portugal and retains the titles of king and majesty his consort will share this courtesy title. Many are inclined to the belief that the latter view is probably correct. Ex-King Manuel visited his aunt, Duchess Karl Theodora of Bavaria, in 1912 and at that time met Princess Augustina Victoria. Manuel is shown walking with Countess of Dudley while visiting in England.

when they should be planted in nursery rows in the open ground and cultivated for one, two or three years, when they are ready to be transplanted to the orchard site.

Thorough cultivation in the nursery rows should be given and some attention should be paid to training or shaping the young trees, so as to insure the best results when transplanted to the orchard.

Cleft Grafting.

Cleft grafting is generally done when the stock is considerably larger than the scion and where the operation is to be performed above ground. The stock is split downward, after it has been cut off at the point where the scion is to be inserted, by using a fine tooth saw. The bark should be cut through first to avoid being torn and so that the sides of the cleft will be smooth. A wedge is put in to keep the cleft open for the insertion of the scion which is cut wedge shape, with a long slope, one edge being a little thicker than the other. The object of this is to have the pressure of the cleft greatest upon the outer side where the union is to be effected.

If the stock is large enough a graft may be inserted on each side of the cleft, but if both grow one should eventually be cut off. After the scion has been properly inserted the wedge should be carefully withdrawn, leaving the scion in place, so that the inner bark of the scion and the stock shall coincide. If the pressure of the cleft is not sufficient to hold the scion in place it must be wrapped with cloth or strings before waxing.

Air Tight Joints.

The stock and scion are now ready for the grafting wax, which may be applied either in liquid form with a brush or in plastic condition after having been worked with the hands, or they may be wrapped with strips of muslin or manila paper previously spread with wax, as heretofore mentioned. Great care should be taken to make every joint air tight or the operation will be a failure.

Regrafting Bearing Trees.

Regrafting is sometimes very desirable when it is found after trees have come into bearing that their fruit is worthless. When the trees are not too old and are in a healthy condition the change can be made with good results. But when the trees have attained a considerable age and have lost their vitality to a considerable extent it would be a waste of time and expense to attempt to change them. Better plant new trees. If, however, in the case of healthy, vigorous trees it is considered advisable to regraft tops it is not best to do this all at one time. Only about one-third of the tree should be grafted the first year, selecting branches in the center and top of the tree. The next year another third may be grafted and the remainder the following year.

Grafting Wax.

Here are formulas for grafting wax: Formula No. 1 (for outdoor work)—Resin, four or five parts; beeswax, one and one-half to two parts; linseed oil, one to one and one-half parts. This is melted in a mass, and when cool enough it may be drawn out into thin strips and applied by wrapping it firmly around the stock where the scion is inserted, or a more convenient mode of using this wax is to spread it while melted upon thin muslin or strong manila paper and when cool cut or tear in strips of convenient width for wrapping around the grafted stock.

Formula No. 2 (for indoor and outdoor work)—Resin, six pounds; beeswax, a pound; linseed oil, a pint. Melt together and when at the temperature of 180 degrees F. apply directly to the joints with a small bristle brush. In order to keep it at the proper consistency the vessel containing the wax may be placed in another vessel containing boiling water.

Locating an Orchard.

The selection of an orchard site is not governed by any arbitrary rule. It is unfortunate that some farms do not afford the best soils and exposures for orchards. But the owners of such should not allow this fact to deter them from planting trees and caring for them afterward.

Some kinds of soils and surface exposures are preferable to others, as they are better adapted to this fruit and require less expense in preparation and in the after care and treatment of the orchard. The most intelligent and experienced orchardists differ as to the best location and exposure of an orchard, some preferring a northern slope, others an eastern, and yet others recommend a southern or even a western slope as best. It is believed that the advantages preponderate in favor of a gentle eastern or northeastern slope, as orchards located on such sites suffer less in both soil and tree from the effects of heat and drought. An orchard with such an exposure will maintain its vigor and longevity better than if inclined to the west or southwest. This is especially true in states south of the New England group, where the summers are long, hot and dry and where it is probable that the greatest injury to trees results from these causes. But, as before stated, all farms do not afford these most favorable sites, especially near the home, which is the most desirable location for the family orchard. Thus the planter will often be forced to forego such a location and take his chances where the natural conditions are not so favorable. If possible the site should be elevated above its immediate surroundings, thus giving a free circulation of air, while such an elevation will also be of great aid in guarding against late spring frosts, so fatal to young fruit at the blooming season.

Soils.

Apple trees will thrive and do well on almost any soil which is well prepared, but the different kinds of soil may require different treatment and after care. A loamy soil is naturally rich in plant food; hence it will need little, if any, manuring in its preparation. A clay soil is the most difficult to prepare and often requires manuring, as well as thorough plowing, replotting and subsoiling. Sandy soils are generally lacking in the necessary plant food. The wood growth on loamy soils will be strong and vigorous, but may not be sufficiently mature to withstand the freezing of the more rigorous winters. Clay lands are not apt to produce such vigorous growth, and orchard trees on such lands will be harder as in winter killing than on most other soils. Timber lands or lands on which forests have formerly grown, if having the proper exposure and drainage, are preferable for orchard sites. Fruit grows on such lands will rank first class in size, quantity and appearance.

A Faithful Likeness.

Supleigh—I really don't think the photographer caught my expression, do you? Miss Keen (looking at photograph)—I don't see any.

STANDARD SCHOOLLIST GROWS

Eola and Oak Dale Added to Polk County List During Week.

Stars sufficient to entitle them to the standard list have been won by the Eola and the Oak Dale schools according to the County Superintendent's office and they have been noted standard during the week.

The Oak Dale school in district No. 51 is taught by Miss Minnie Wunder and the board consists of Joe Murphy, O. E. Dennis, W. Barnhart and C. J. Bruce, clerk. The school population of the district is 41 and the valuation is \$81,400 with a special school levy of four mills.

The Eola district is taught by W. A. Fletcher and the board consists of W. H. Patterson, W. D. Magee, T. W. Brunk, R. Brunk, clerk. The school population is 44, the valuation \$121,660 and the special tax levy five-tenths of a mill.

SHOW BABIES AT STATE FAIR

Much Interest Taken in Coming "Better Baby" Show.

Portland, Ore., May 13.—The "Better Baby" show to be held at the State Fair next fall is already attracting much attention and promises to be the biggest thing of its kind ever attempted in the Northwest. Splendid prizes are offered for the best youngsters shown.

Every Grange, Commercial club and school in the state is urged to hold local shows and send their best babies to the State Fair to enter the all-Oregon competition. There are no entry fees, but special blanks must be used for entries. These may be secured without cost from O. M. Plummer, superintendent, Engenies department, North Portland, Oregon.

FORM LINCOLN FIRE PATROL

Timber Owners Combine to Protect Forests Under New Law.

W. V. Fuller, of Dallas, returned Saturday from Toledo and Newport where he attended a meeting of the timber owners of Lincoln county in company with State Forester F. A. Elliott and District Forester C. S. Chapman. At this meeting the Lincoln County Fire Patrol association was formed. The directors elected are: W. R. Morgan, W. A. Ball, Toledo; W. R. Hall, Siletz; Lewis Montgomery, Portland; W. V. Fuller, Dallas.

Reformed?

A. V. R. Snyder, the veteran newspaper man, who has written editorials and gathered in the items on newspapers in all parts of the state ever since the historic meeting at Champoug, which his friends say he reported, was in the city yesterday and let his feet fall lightly on the Axminster rugs in the Capital Journal editorial rooms. The old horse editor and Al. used to work on newspapers in The Dalles some 20-odd years ago, though not on the same paper—one little paper being unable to stand the combination. Al. has reformed and quit, the other fellow ought to, but can't.—Salem Capital Journal.

Osteopathy.

It gets to be a threadbare explanation that osteopathy is not massage, and yet we have to make it over and over, for many people hold to such an opinion.

Osteopathy is neither a "scientific form of massage," nor any other kind. It is a complete school of medical practice, although not using drugs as remedial agents, and it might employ massage as an adjunct, just as any other school does when massage happens to be required. But do not confuse this broad science of natural medicine with the limited art of the masseur, for they have very little at basis to cause confusion between them, except that both are performed with the hands. But, then, the hands are used to do most everything, so that it is not sufficient apology for saying that "Osteopathy is only massage."—Reprint from Osteopathic Health.

BIG LOT FREE FOR JUST A NAME

We have purchased from the Miller company a beautiful tract of land in Polk county within the eastern portion of the city of Dallas which we are subdividing into lots of 50x100 each and also quarter, half and acre tracts and are desirous of acquiring an appropriate name for this exceptional fine addition to the city of Dallas, a name that will imply the advantages that are exceptional to this particular location. Think of it; we are offering a beautiful city lot 50x100 feet absolutely free to the man, woman or child that sends us before May 15 the most suggestive name for this exceptional home place. We have changed this date from May 19 to the 15th to allow five days more as there have been so many replies and some requests for extension of time and as our surveyors will not finish the subdivision before that time this will add to your chances. This is confined to Polk county. We will announce the judges in the next issue of The Polk County Observer, after May 15. Forward all names and requests to the Federal Trust Company, care Gail Hotel. No names to be accepted after noon of May 15. The above progress to your city depend greatly upon the paved streets and impression our prospective buyers have in comparing this with other towns of less size. The hour of progression is at hand; the outside world is looking here for all-around conditions which will be evident by only what can be seen in PAVED STREETS. FEDERAL TRUST COMPANY.

Satisfaction of Mortgage.

The Observer has added Satisfaction of Mortgage to its stock of legal blanks. Notaries and Attorneys may now secure them in any quantity desired. Please orders for legal blanks given prompt attention.

THE NEW TREATMENT

ENLARGED TONSILS CATARRH, ASTHMA BRONCHITIS and other LUNG DISEASES

as used by Dr. Toel

The Chicago Specialist

Now in Dallas

To Introduce His Physiologic Methods

Catarrh is a chronic disease of the nasal cavity caused by germs that have infected the mucous membrane of the nose and postnasal space.

In some of these cases there is a constant discharge of mucus; in others there is a pus discharge; while in others yet there is a swelling of the mucous membrane over the turbinated bones of the nose which makes it impossible to breathe through the afflicted nostril.

The routine treatment as applied by most physicians consists of sprays and douches. These of course clear the nasal passage, but the germs being in the glands of the mucous membrane can not be reached by it and are not killed. The catarrh continues.

In the physiologic treatment as used by Dr. Toel electrodes are introduced into the nose, connected with currents of five hundred thousand volts. These currents cause only a little warmth and a slight prickling sensation, but they generate an enormous amount of ozone which kills the germs in the mucous membrane. In those cases of catarrh where there is swelling and thickening of the mucous membrane Dr. Toel either shrinks this with the high voltage current or where the bones itself in the interior of the nose are afflicted he performs an electric operation with the low voltage current which permits him to destroy without the loss of any blood and with none or scarcely any pain as much of the diseased mucous membrane as may be necessary to allow the patient to breathe properly through his nose again.

In enlarged tonsils Dr. Toel either removes the entire diseased tonsil without any loss of blood in a few minutes with the electric loop operation, or he attacks the diseased spots in the tonsils with the low voltage current and thus brings the tonsil to shrinkage. Sometimes he uses the high voltage current for this. All these operations are bloodless and cause very little pain. They are also free of the danger of blood poisoning as the blood vessels and lymphatic vessels are securely closed up by the very operation.

In Asthma, Bronchitis and other Lung diseases Dr. Toel uses a current of extremely high voltage which projects a stream of blue fire against the chest of the patient; but this fire does not burn; the fire can be seen by the patient but he feels only a slight warmth. The current however penetrates entirely through the chest and generates ozone in enormous quantities. Any disease germs in its path are quickly destroyed and in addition the blood circulation in the lungs is improved and regulated. Pain and expectoration of pus as in an attack of the grippe are very quickly stopped; fever goes quickly down and the heart beats become regular. Medicines taken into the stomach are almost useless in such cases, but electricity does the work quickly and without pain.

Dr. Toel has for 30 years made a specialty of electrical operations and treatments.

Read The Observer of April 29, about a cancer operation performed in Dallas by Dr. Toel, and that of May 9th about an operation for renal growth; also The Observer of April 15, 18, 22 and 25, May 2, 6, and 9 about electrical treatment of cancers and tumors, piles and fistula, diseases of kidneys, bladder, prostate gland and stricture, and diseases of women, and skin diseases, polypus and goitre.

Electrical or other physiologic methods are also used by him in nervous diseases, neurasthenia, diseases of the liver, stomach, kidneys, cases of the liver, stomach, dyspepsia, and constipation.

Dr. Toel intends to make his methods known throughout the Willamette valley before opening offices in Portland. While he will stay for sometime in Dallas, patients who wish to consult him ought to consult him without delay, for while some cases of cancer allow him to operate at once when he patients consults him, and send the patient home the same day free of his career; in other cases it is necessary for the patient to stay under his care for some time. So better come immediately—a friendly call costs nothing.

Dr. Toel can be found at 610 Washington street, Dallas, one-half block from S. P. Railway depot from 9 to 12, 2 to 5, and 7 to 8, week days and from 9 to 1 on Sundays. Telephone 1303.

People interested should cut out the articles above mentioned and paste them in a scrap book, as they may come handy at any time.

A smart man likes to pose as such and likes to hear his buzz. But no man ever knows as much as he pretends he does. —Cincinnati Enquirer.

"Where," asked the female suffrage orator, "would man be today were it not for woman?" "He'd be in the garden of Eden eating strawberries," answered a voice from the gallery.—Photo Bits.

The Power You Need

A thousand or an eighth horsepower at the touch of a switch—or any amount between. Always ready every instant day or night. Electric power is **Economical and Unfailing**. It avoids the friction loss in belting and line shafting—avoids the dirt, noise and the numberless expensive vexations inseparable from private power plant operation. Let us show you how much YOU can save.

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Real Estate Bargains

The A. J. Barham real estate agency offers the following choice buys in real estate in Dallas and vicinity. Each one will bear the closest investigation.

A good 5 room house on Ash street; large wood shed; house plastered and electric lighted and telephone; good well; large lot 60x150 feet with plenty of fruit; price \$1150; \$580 cash; \$570 can run at \$10 per month without interest.

About 87-100 of an acre on Levens street, close in at \$1500; 6 room house, about 100 young fruit trees, mostly peaches, 1-8 acre strawberries; price \$1500; \$1000 cash; terms on balance.

14 1/2 acres, 4 in cultivation, most all planted, 65 apple trees, 2 years

old, lots of berries, small barn, acres of timber; land 4 1/2 miles out. Price \$75 per acre; balance can assume \$600; balance cash. 5 acres 1 1/2 miles of Dallas, in bottom land; 6 room house, good repair; wood shed and house; small barn; place water by well and creek; 2 fine cows, chickens, all carpets on floor, stairs, some linoleum on floor, and several other items too numerous to mention; price \$1900, with if taken soon. This is a little place.

A. J. BARHAM

Office 608 Court Street

Dallas, Oregon

PUBLICITY without Salesmanship is Nix; Publicity plus Salesmanship is Advertising

---Elbert Hubbard

Star Transfer Co.

WE MOVE ANYTHING THAT IS MOVEABLE

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Phone Stands—Webster's Confectionery 511 Ellis' Confectionery 1063 Barn 1074

Did You Ever Notice?

When a duck lays an egg she just waddles off as if nothing had happened. When a hen lays an egg there's a hell of a noise.

The hen advertises, Hence the demand for hen's eggs instead of ducks.

---The Moral Is Obvious

West Side Marble Works

G. L. HAWKINS, Proprietor.

MONUMENTS, HEADSTONES AND CUTTING.

A Complete Line of All Latest Designs.

For Twentieth Century Printing in the Office of the

Polk County Observer

Its The Home of Good Printing