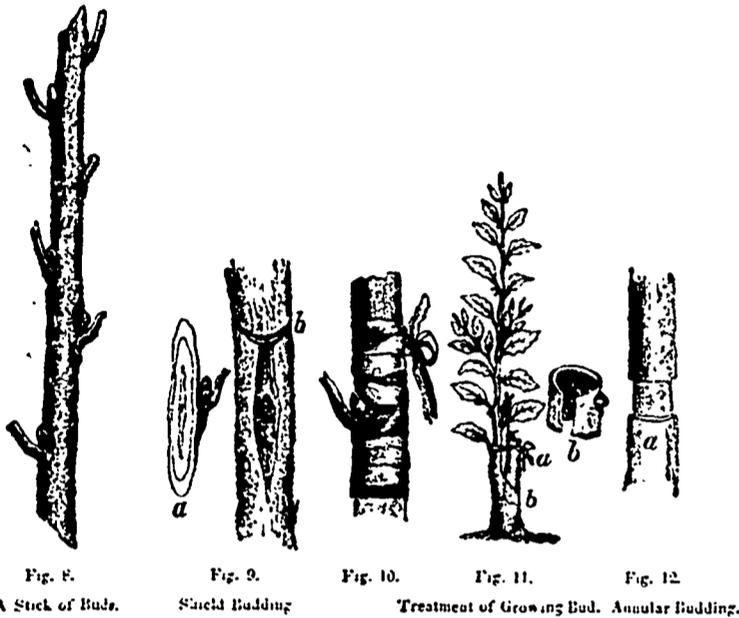




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BUDDING.

We have passed over that portion of Mr. Downing's treatise, which treats of the mode of producing new varieties. Dr. Van Mons theory of obtaining them from the seed by constantly re-sowing, is a process that requires years to complete it, and few will have the patience to carry it out. The practice of cross-breeding introduced and successfully followed by Mr. Knight, the most distinguished horticulturist of the age, and for a long time President of the London Horticultural Society, is a more direct and more scientific process, but it requires more care than can be given to it by any but amateurs, and they will generally resort to those works which contain full information upon the subject. The varieties we already have, are sufficiently numerous to afford abundant material for the most fastidious fruit grower. For the information of our readers on this point, we subjoin a list of the varieties recommended by the Committee on Fruits of one of the Horticultural Societies in the State of New York. The climate and soil of this State, are not very different from ours, and those kinds that flourish there may be expected to do well here.

BUDDING.

Budding (inoculating, of the old authors) differs from common grafting not the least in its nature or effects. Every bud is a distinct individual, capable of becoming a tree under favourable circumstances. In grafting, we use a branch, composed of several buds with a considerable quantity of bark and wood; while in budding, we employ but a single bud, with a very small quantity of the adjoining bark and wood.

The advantage of budding fruit trees, compared with grafting, are so considerable, that in this country it is ten times as much practised. These are, first, the great rapidity with which it is performed; a skilful budder with a clever boy following him to tie the buds, being able to work from a thousand to twelve hundred young nursery stocks in a day. 2nd. The more convenient season at which it is performed, in all countries where a short spring crowds garden labours within a small space. 3rd. Being able to perform the operation without injuring the stock in case of failure, which is always more or less the case in stocks headed down for grafting. 4th. The opportunity which it affords, when performed in good season, of repeating the trial on the same stock. To these we may add that budding is universally preferred here, for all stone fruits, such as Peaches, Apricots, and the like, as these require extra skill in grafting, but are budded with great ease.

The proper season for budding fruit trees in this country is from the first of July to the middle of September; the different trees coming into season as follows; Plums, Cher-

ries, Apricots on Plums, Apricots, Pears, Apples, Quinces, Nectarines, and Peaches. Trees of considerable size will require budding earlier than young seedling stock. But the operation is always, and only, performed when the bark of the stock separates freely from the wood, and when the buds of the current year's growth are somewhat plump, and the young wood is growing firm. Young stocks in the nursery, if thrifty, are usually planted out in the rows in the spring, and budded the same summer or autumn.

Before commencing you should provide yourself with a budding knife, (about four and a half inches long,) having a rounded blade at one end, and an ivory handle terminating in a thin rounded edge called the half, at the other.

In choosing your buds, select thrifty shoots that have nearly done growing, and prepare what is called *stick of buds*, Fig. 8, by cutting off a few of the imperfect buds at the lower, and such as may be yet too soft at the upper ends, leaving only smooth well developed single buds; double buds being fruit-buds. Cut off the leaves, allowing about half an inch of the foot-stalks to remain for conveniently inserting the buds. Some strands of bass-matting about twelve or fourteen inches long, previously soaking in water to render them soft and pliable, (or in the absence of these some soft wollen yarn,) must also be at hand for tying the buds.

Shield or T budding is the most approved mode in all countries. A new variety of this method now generally practised in this country we shall describe first as being the simplest and best mode for fruit trees.

American shield budding. Having your stick of buds ready, choose a smooth portion of the stock. When the latter is small, let it be near the ground, and, if equally convenient, select also the north side of the stock, as less exposed to the sun. Make an upright incision in the bark from an inch to an inch and a half long, and at the top of this make a cross cut, so that the whole shall form a T. From the stick of buds, your knife being very sharp, cut a thin, smooth slice of wood and bark containing a bud, Fig. 9, a. With the ivory haft of your budding knife, now raise the bark on each side of the incision just wide enough to admit easily the prepared bud. Taking hold of the footstalk of the leaf, insert the bud under the bark, pushing it gently down to the bottom of the incision. If the upper portion of the bud projects above the horizontal part of the T, cut it smoothly off now, so that it may completely fit, b. A bandage of the soft matting is now tied pretty firmly over the whole wound, Fig. 10, commencing at the bottom, and leaving the bud, and the footstalk of the leaf only exposed to the light and air.

Common shield budding, Fig. 11, practised in all gardens in Europe, differs from the foregoing only in one respect—the removal of the slice of wood contained in the bud. This is taken out with the point of the knife, holding the bud or shield by the leaf stalk, with one hand, inserting the knife under

the wood at the lower extremity, and then raising and drawing out the wood by bending it upward and downward, with a slight jerk, until it is loosened from the bark; always taking care that a small portion of the wood remains behind to fill up the hollow at the base or heart of the bud. The bud thus prepared is inserted precisely as before described.

The American variety of shield budding is found greatly preferable to the European mode, at least for this climate. Many sorts of fruit trees, especially Plums and Cherries, nearly mature their growth, and require to be budded in the hottest part of our summer. In the old method, the bud having only a shield of bark with but a particle of wood in the heart of the bud, is much more liable to be destroyed by heat, or dryness, than when the slice of wood is left behind in the American way. Taking out this wood is always an operation requiring some dexterity and practice, as few buds grow when their eye, or heart wood is damaged. The American method, therefore, requires less skill, can be done earlier in the season with younger wood, is performed in much less time, and is uniformly more successful. It has been very fully tested upon hundreds of thousands of fruit trees, in our gardens, for the last twenty years, and, although practised English bud-ders coming here, at first are greatly prejudiced against it, as being in direct opposition to one of the most essential features in the old mode, yet a fair trial has never failed to convince them of the superiority of the new.

After treatment. In two weeks after the operation you will be able to see whether the bud has taken, by its plumpness and freshness. If it has failed, you may, if the bark still parts readily, make another trial; a clever budder will not lose more than 6 or 8 cents. If it has succeeded, after a fortnight more has elapsed, the bandage must be loosened, or if the stock has swelled much, it should be removed altogether. When budding has been performed very late, we have occasionally found it an advantage to leave the bandage on during the winter.

As soon as the buds commence swelling in the ensuing spring, head down the stock, with a sloping back cut, within two or three inches of the bud. The bud will then start vigorously, and all "robbers," as the shoots of the stock near to and below the bud are termed, must be taken off from time to time. To secure the upright growth of the bud, and to prevent its being broken with the winds, it is tied when a few inches long to that portion of the stock left for the purpose, Fig. 12, a. About midsummer, if the shoot is strong, this support may be removed, and the superfluous portion of the stock smoothly cut away in the dotted line, b, when it will be rapidly covered with young bark.

We have found a great advantage, when budding trees which do not take readily, in adopting Mr. Knight's excellent mode of tying with two distinct bandages; one covering that part below the bud and the other the portion above it. In this case the lower bandage is removed as soon as the bud has taken, and the upper left two or three weeks longer. This, by arresting the upper sap, completes the union of the upper portion of bud, (which in plums frequently dies, while, the lower part is united,) and secures success.

Reversed shield budding, which is nothing more than making the cross cut at the bottom, instead of the top of the upright incision in the bark, and inserting the bud from below, is a good deal practised in the south of Europe, but we have not found that it possesses superior merit for fruit trees.

An ingenious application of budding, worthy the attention of amateur cultivators, consists in using a blossom-bud instead of a wood-bud; when, if the operation is carefully done, blossoms and fruit will be produced at once. This is most successful with the Pear, though we have often succeeded with the Peach. Blossom-buds are readily distinguished, as soon as well formed, by their roundness, and in some trees by their growing in pairs; while wood-buds grow singly, and are more or less pointed. We have seen a curious fruit grower borrow in this way, in September, from a neighbour ten miles distant, a single blossom-bud of a rare new pear, and produced from it a fair and

beautiful fruit the next summer. The bud, in such cases, should be inserted on a favourable limb of a bearing tree.

Annular budding Fig. 12, we have found a valuable mode for trees with hard wood, and thick bark, or those which like the walnut, have buds so large as to render it difficult to bud them in the common way. A ring of bark, when the sap is flowing freely, is taken from the stock, a, and a ring of corresponding size containing a bud, b, from the scions. If the latter should be too large a piece must be taken from it to make it fit; or should all the scions be too small, the ring upon the stock may extend only three fourths the way round, to suit the ring of the bud.

An application of this mode of great value occasionally occurs in this country. In snowy winters, fruit trees in orchards are sometimes girdled at the ground by field mice, and a growth of twenty years is thus destroyed in a single day, should the girdle extend quite round the tree. To save such a tree, it is only necessary, as soon as the sap rises vigorously in the spring, to apply a new ring of bark in the annular mode taken from a branch of proper size; tying it firmly, covering it with grafting clay to exclude the air, and finally drawing up the earth so as to cover the wound completely. When the tree is too large to apply an entire ring, separate pieces, carefully fitted, will answer; and it is well to reduce the top somewhat by pruning, that it may not make too large a demand on the root for a supply of food.

Budding may be done in the spring as well as at the latter end of summer, and is frequently so performed upon roses, and other ornamental shrubs, by French gardeners, but is only in occasional use upon fruit trees.

The Committee of the Horticultural Society of the Genesee Valley, being requested to select a few of the best varieties of apples and other fruits, made the following reply. We give the list of apples only:—

In compliance with the above suggestion, the committee present the following list. In doing so, they wish to state, that they have confined themselves wholly to such varieties as have been satisfactorily proved in this section.

So great is the diversity of taste, in regard to the merits of fruits, and so numerous are the excellent varieties from which to choose, that the committee have experienced some difficulty in adopting a list, even as extended as the following.

There are, no doubt, many other varieties as good, and, in the opinion of some, perhaps better than some of those; but the committee are unanimously agreed that the excellence of this selection is beyond a doubt, and that the whole or a part, as circumstances require, may be cultivated with entire confidence.

The names of the kinds are placed in the order of ripening.

APPLES.

SUMMER APPLES—July and September.

Early Harvest.	Sweet Bough, or
" Strawberry.	Yellow Bough,
Red Astrachan.	Golden Sweet.

FALL APPLES—September to December.

Early Joe,	Gravenstein,
Pomer.	Fall Jenneting.
St. Lawrence,	Holland Pippin.
Jetsey Sweet.	

WINTER APPLES—December to June.

Twenty oz,	Rhode Island Greening,
Fame-c,	Esopus Spitzenburg,
Red Canada,	Baldwin,
Peck's Pleasant,	Green Sweeting,
Yellow Bellflower,	Northern Spy,
Swar,	Roxbury Russet,
Thomas Sweet,	Yellow Newton Pippin.

CURE FOR THE CATERPILLAR.—A gentleman at Galushick's has discovered that ex-limated bark, spread on the surface round the roots of gooseberry bushes, is an effectual remedy for caterpillar. A more simple and cheap remedy could scarcely be wished for. A cart load of the bark, which costs about 6d, is amply sufficient for the largest garden.—[Mercury.]