

by the following method. After selecting the limb to be grafted, saw it off at the point desired. Next split the stub with a heavy knife or cleaver and insert a wedge of hardwood in the center of the cleft to hold it open. With a sharp thin-bladed pocket chisel cut a thin sliver from each side of the cleft, leaving the sides smooth. From two-year-old wood, cut a short scion with two or three buds. Whittle the scion wedge-shaped so

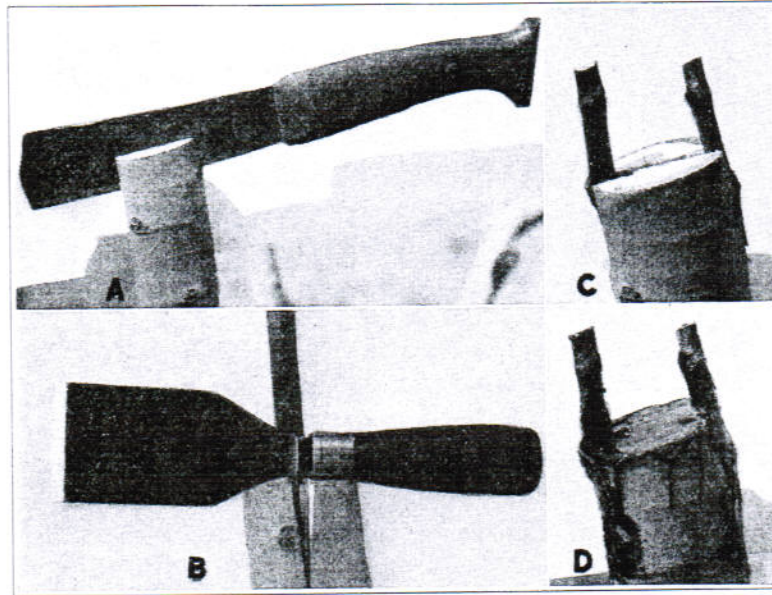


Fig. 18.—Tools and steps necessary in the process of cleft-grafting fig stubs not more than 4 inches in diameter: *A*, cleaver for splitting the stock; *B*, thin-bladed chisel for cutting a V-shaped notch, and, inserted in the cleft, a hardwood wedge for holding open the cleft; *C*, scions inserted into the clefts; *D*, freshly cut surface covered with grafting wax, the process completed.

that it fits tightly into the cleft, making the wedge slightly thicker on the outer side. With a small hammer drive the scion into place so that the inner or cambium layer of the scion is connected with the same layer of the stock. After the scions are set, one on each side of the limb, carefully withdraw the wedge and apply wax so that every part of the exposed wood and cleft is well coated. It is not necessary to tie string around the stub. One very material advantage of the cleft graft is that it can be done early in the season before the bark slips.

Bark grafting is very similar to budding except that a scion is used instead of a bud. The work is best done in late March or April, whenever the bark is found to slip freely. Large limbs are cut back to stubs and

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The buds are cut from wood of the previous season's growth if spring budding is practiced, and from succulent wood of the present season if fall budding is done. Make as small a T-shaped cut as possible and let the bud push its own way down at the base. Wrap with ordinary three-ply cotton string and leave for about three weeks, when the strings can



Fig. 17.—Either shield buds, as here illustrated, or patch buds inserted in fig branches up to 3 or 4 inches in diameter are readily forced out and make a good union with the stock.

be cut. The stock must be partly cut back in order to force out the bud, and it is advisable to leave a safety branch or two to prevent too rapid growth from the buds. Patch buds are successfully used in branches several years old. Shield buds can readily be inserted at the base of suckers forced out by previously cutting the large branches severely.

Grafting, however, is the usual method for topworking fig trees. Two methods of grafting are commonly employed, namely, the cleft graft and the bark graft. Successful cleft grafting (fig. 18) has been done on thousands of young trees with branches up to 3 or 4 inches in diameter,

few years the trees are pruned in order to shape the tree properly and to provide bearing surface. As the mamme crop of mature caprifig trees is usually a valuable asset, heavy winter pruning is not generally practiced. If necessary, some thinning out of branches may be done in mid-summer after the harvesting of the profichi crop. One weak point in the succession of crops, the break between the profichi and the mammoni crops, can in the case of some varieties be overcome by pinching back the tips of new shoots here and there over the tree, about the middle of May. This temporarily stops the terminal growth but stimulates development of lateral fruit buds which will be ready to receive blastophagas early in June. Mature fig trees may be pruned at any time after the leaves drop and the wood becomes dormant. There is no evidence to show that pruned trees are any more susceptible to frost damage or to drying out at the tips than unpruned trees of the same age and under the same growing conditions.

*Rejuvenation of Decadent Trees.*—Reference has already been made to the occasional necessity for rejuvenation of old trees weakened by sunburn or other causes. In a sound orchard-management program where annual or biennial pruning is practiced, such a drastic treatment should never be necessary. Orchard or border fig trees with sound trunks and healthy root systems can be renewed successfully, however, by cutting back the main framework branches to short stubs (fig. 16), thus stimulating a growth of vigorous suckers from which new framework branches can be selected. Many growers prefer to spread this renewal of top over a three or four-year period by stubbing back a few main branches each season, at the same time getting a crop from the branches left. In any system of heavy pruning or stubbing back it is essential that the trunk and scaffold branches be protected from sunburn by a heavy coat of whitewash and that large pruning wounds be treated with wax or asphalt emulsion.

*Topworking.*—Any variety of fig tree in healthy condition can be topworked to another more desirable variety. Young fig trees can be readily worked over by budding, either the common shield bud (fig. 17) or the patch bud being used. In branches from one to three years old the buds, cut large for the older limbs, can be readily inserted any time the bark is slipping freely. This means practically any time during the growing season from April until October.

Buds inserted early in the season can be forced out by cutting back the stock and a good growth from the bud secured the same year. Buds placed in September or October will remain dormant until spring and must risk damage from cold and wet weather.

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