

PRUNING GUIDE

*for Better Shrubs,
Trees, Fruits and Flowers*

WISS

Plus

*Suggestions for Flower
Arrangements and for
Longer Lasting
Cut Flowers*

J. WISS & SONS CO., NEWARK 7, N.J.

25¢

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Before you begin

Equipped with your nice new sharp Wiss pruning shears, perhaps you are tempted just to go out into the garden and start pruning.

But don't be too hasty. Unless used with care and intelligence, a pair of pruning shears can be very destructive. That's why we have gone to the trouble of preparing, for the owners of Wiss pruning tools, these instructions concerning the purposes for which they should be used, and the correct methods of using them.

We suggest that you study these pages before you tackle the various pruning tasks that will make your plants more vigorous and healthy, and your grounds more beautiful and attractive.

No pruning should ever be done without a sound reason for doing it. Before any pruning cut is made, the gardener should know exactly what he wishes to accomplish by making it. This little book tells you what you can reasonably hope to accomplish by pruning—and how to set about doing it.

SECTION I

Why we prune

WHY PRUNE?

Why not just let Nature take her course, and allow plants to grow naturally?

The answer is that what Nature desires a plant to do, and what the gardener would like to have it do, are usually two very different things.

Take such a common example as your Privet hedge. Nature designed the Privet plant as a shrub that would grow 15 to 20 feet tall and produce in late spring a multitude of white blossoms. The gardener's idea is that it shall make him a nice fence of living green, 4 or 5 feet high, with never a flower to be seen.

Or consider the luscious Peach. So far as Nature is concerned, it could just as well be small and bitter; all she asks is a peach pit that will produce another Peach tree.

Or take the Rose. On a bush that is kept well pruned there will be a succession of Roses, whereas, left to Nature, the plant would send up a few long stems, flower, and form "Rose-apples," full of seeds.

Nature as a Pruner. It should not be assumed, however, that Nature does no pruning. On the contrary, she goes at the job ruthlessly. Walk into the woods, and every dry twig that snaps under your foot, every dead branch above your head, is an example of Nature's pruning methods. Not only do the various trees, shrubs and plants compete for survival against each other, but *every branch on the same plant is competing with his fellow branches.* The weakest die, and others are pruned away.

Such pruning, however, takes a long time, and wastes the plant's energies. The gardener, by intelligent pruning, can save weeks, months—or in some cases, even years of time in obtaining the results he wants.

Pruning Objectives

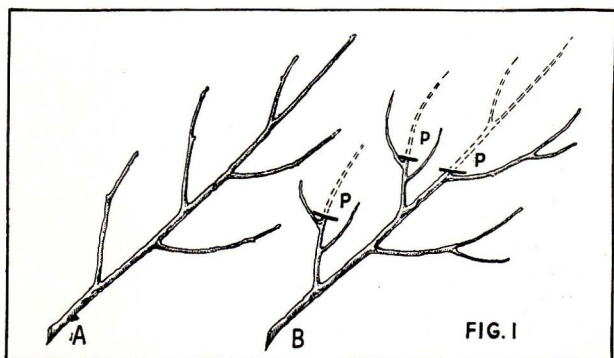
With this much information as to *why* we prune, let us take a look at some of the specific results we can hope to accomplish by pruning.

To Control Growth. Around the home grounds, with a general assortment of trees, shrubs, hedges, roses, and perhaps a few fruit trees, pruning is more often employed to control growth than for any other purpose. We want to make certain that plants assume definite forms, or to confine them within certain limits as to size. (See Fig. 1)

How is this to be accomplished?

If you have observed the growth of plants, from season to season, or even within one season, you will have noticed that the most vigorous new growth takes place at the *top* of the plant, or at the *ends* of side shoots or branches.

New growth develops from “buds” formed at the tip of the main stem—or the tips of side branches; and from other buds, usually formed in the leaf axils along the side branches. These may be formed alternately (as on Roses); in pairs (as on Privet and Lilac); or even in

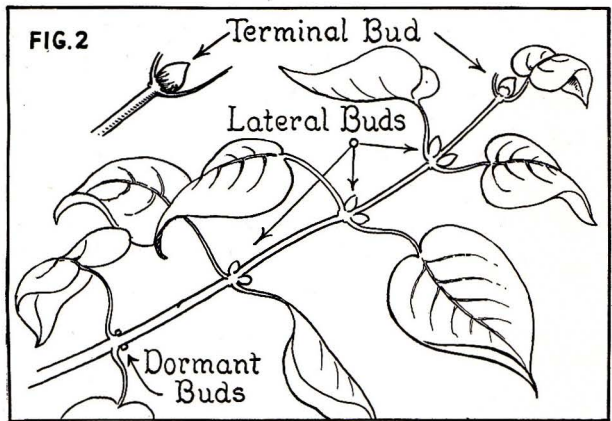


To control growth: By pruning off the ends of branches or the tips of side shoots, the amount and the direction of growth can be changed. A shows an unpruned branch; B, the growth resulting from pruning at P, P, P; and the broken lines show growth that would have developed without pruning.

whorls of three or more. Still lower down there may be other buds, scarcely perceptible. The four different types of buds are called *terminal* buds (those at the tips of branches); *lateral* or axillary buds; *dormant* buds (lateral buds that normally do not develop growth); and *adventitious* buds (those which may develop under extraordinary conditions.) (See Fig. 2)

Normally, the strongest new growth is made from the terminal buds; sometimes from those just below it. Normally, too, more vigorous growth is made from the buds on the *upper* surface of a branch or limb. (See Fig. 3)

When growth is resumed, after the buds have been formed, not all of the buds will start. Some of them may have been killed or injured; others just remain inactive, though alive, because they are not needed. Such buds are termed *dormant*; they are Nature's reserve supply, to be used only in case of necessity.

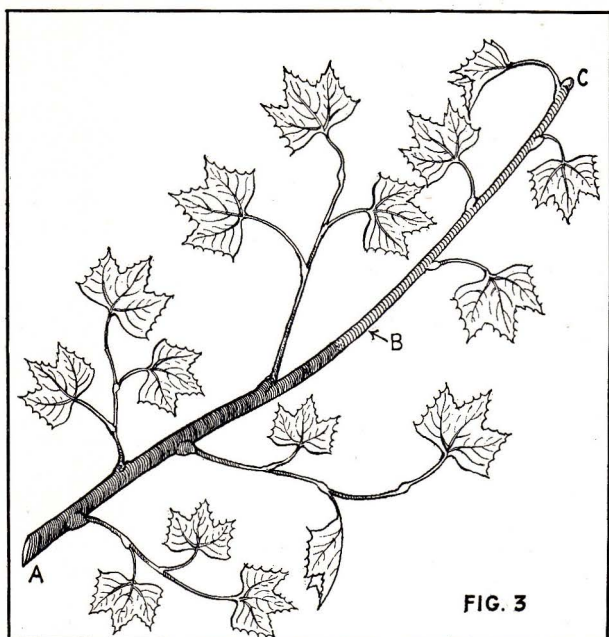


Types of growth buds: Branch of Lilac (new growth) showing location and relative size, in early September, of buds that will produce new growths in spring.

If the terminal bud is removed, then the bud or buds below it get the food (supplied by the sap) intended for it, and as a result make more vigorous growth than they otherwise would. If too many of the active lateral buds are removed, then the *dormant* ones become active. If terminal, lateral and dormant buds are removed, then *adventitious* buds may start growth. You have seen this happen when a Wild Cherry has been cut to a stump, or a Willow has been blown over.

It becomes obvious, then, that by deciding which buds are to be left to grow, and the location of these buds on the plant, we can to a great degree—and within certain limits—determine the amount and the direction of new growth, and consequently the size, shape, and growth-habits of the plant.

How these controls, through pruning, are applied to different classes of plants is discussed in further detail in the Section “What and When to Prune.”

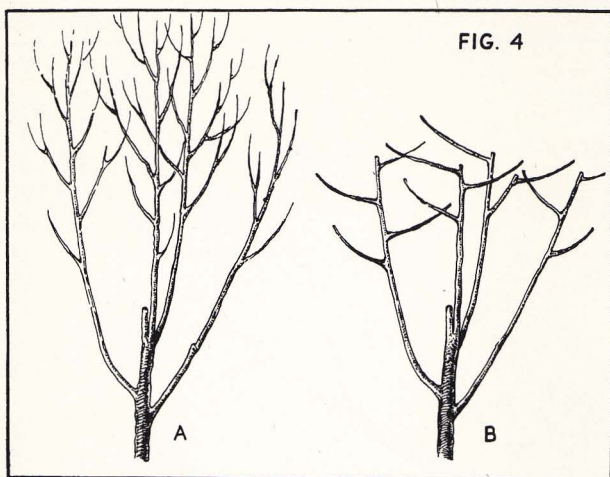


One season's growth from buds: Lateral branch of Sycamore. A to B, last year's growth, with new lateral branches from lateral buds, 12 to 22 inches long; and B to C, new growth from terminal bud, 28 inches long. Top buds make strongest growth.

To Increase Yields. A second objective of pruning is to increase yields. The “yield” need not necessarily be fruit: it may be flowers, or ornamental berries, or even just shade. Many plants tend to produce most of their flowers, as well as the maximum of new growth, at the tops of the plants. Judicious pruning will induce more growth lower down, and produce a great many more flowers. Or, by removing parts of the plant, we may get larger, more perfect blooms. This is frequently done with many perennials, and even annuals, in growing extra fine specimens for show purposes.

Again, a tree that would normally assume a tall, pyramidal shape, may be made to form a densely branched, spreading "head," that will furnish desired shade. (See Fig. 4)

In pruning to control size or form, it is usually the more vigorous growing parts of the plant that are removed; in pruning to increase yields, it is more often the weaker parts; but this is not a hard-and-fast rule.



To control form: *Unpruned and pruned young fruit trees. Unpruned tree (A) would make strong vertical growth; pruned tree (B) will form a low, spreading head.*

To Aid in Transplanting. Another important function of pruning is to aid in the process of transplanting. No matter how carefully a tree or a plant is dug up, a large part of the root system, and especially of the feeding roots which absorb moisture from the soil, are destroyed. Consequently the natural balance between root-growth and top-growth is destroyed. (See Fig. 5)

A rather drastic pruning back of the top—often from one-fifth to one-third—helps to restore this balance, and thus lessens or prevents the severe wilting that would otherwise take place. In the case of dormant shrubs, vines and Roses, the pruning back is even more severe, often only a few inches of top-growth being left.

For the Health of the Plant. The general health and vigor of a plant can often be maintained, or improved, by pruning. In pruning for this purpose the first step is to remove all dead wood and broken branches or stems.

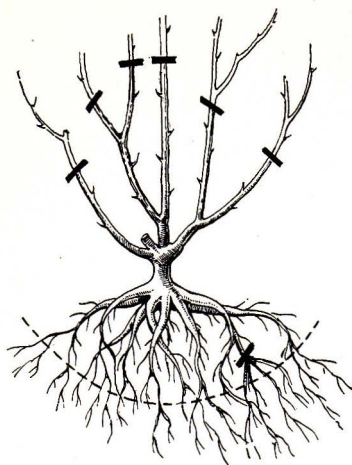


FIG. 5

Pruning for transplanting: Top growth is cut back to maintain balance between top and root system, which has been reduced in digging.

The second is to prune away any diseased sections to prevent, or at least check, the spread of the disease. (See Fig. 6)

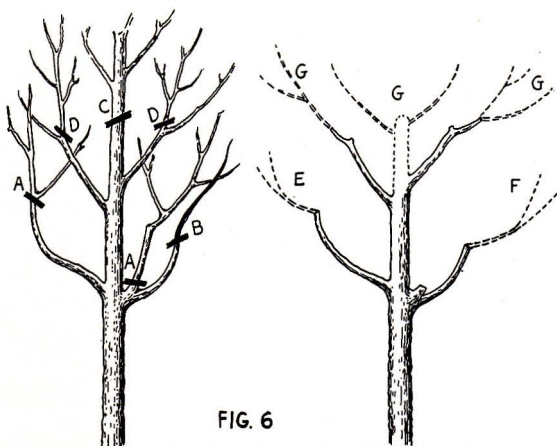


FIG. 6

Pruning for health and vigor: (Left) Removal of (A) branches which cross or rub; (B) diseased growth; (C) leader, if tree is to be kept low for spraying; (D) surplus growth at center to admit sun and air. (Right) E, F, and G, new growth following pruning indicated at left.

Many plants tend to make too many branches or lateral growths, thus forming a dense thicket within the plant itself. Sunshine and air are necessary to the production of vigorous foliage, and normal flowers and fruits. Sunshine and air are also enemies of many diseases and insect pests. In such cases the removal of surplus growths is beneficial. Limbs or branches that cross and rub each other, or that tend to overcrowd the center of the plant, should be taken out. By pruning at the right points, the new growths can be directed *outward*, leaving a more or less open center.

In General

No matter what type of pruning you are doing, or for what objective, keep in mind that:

1. The strongest new growth will be made from the top-most buds.
2. Buds at the top of a branch or shoot, or facing out, will tend to grow more vigorously than their opposites.
3. New growth will tend to seek sunshine, or light.
4. New growth will tend to develop in the direction in which the bud points.
5. Vigorous plants (in general) should be pruned LESS severely than weaker plants of the same kind.
6. The more vigorous parts of the *same* plant (in general) should be pruned MORE severely than the weaker parts.
7. Any tree or plant, no matter how often pruned, will tend to resume its natural form.
8. There is a limit beyond which pruning defeats its own purposes. If it is too severe, Nature will revolt, and either make an abnormal growth of wood and foliage at the expense of flowers and fruits; or get really riled and quit altogether.

**BAD PRUNING IS LIKELY TO BE
MORE INJURIOUS THAN NO PRUNING.**

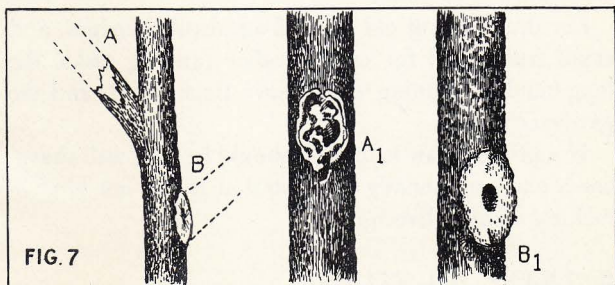
SECTION 2

How to prune

FROM WHAT HAS BEEN SAID SO FAR, it is evident that there are many types of pruning. All of them, however, have one thing in common: they aim at *removing from a plant some part or parts of it which interfere with what we want the plant to do.*

As already explained, the reasons why pruning may be desirable are many and varied. Reaching the decision as to what part of a plant should be cut out may be termed the *diagnosis*. We have yet to consider the *technique* of the operation itself.

Any pruning—like any operation in a hospital—carries with it danger of bad after effects. Very literally, it is often the case that “the operation was successful—but the patient died!”



Pruning cut—and results: *A*, ragged cut and long stub, both inviting decay; *B*, clean, smooth cut; *A-1* (a few years later) stub has rotted back, causing decay cavity; *B-1*, cut is healing properly, with new bark gradually covering it completely.

In pruning, as in surgery, the first thing to guard against is infection. This may not take place until weeks or months later, and still be directly due to a pruning operation. (See Fig. 7)

Any operation leaves a wound. The objective is to get a wound that will heal. Most plants, fortunately, including even very large trees, have a remarkable capacity for healing their wounds. Nevertheless, every possible care should be taken to leave only such wounds as can heal readily. Therefore, in every kind of pruning, the pruner should be careful to:

1. MAKE CLEAN, SMOOTH CUTS.

Ragged, torn, or even bruised bark at the edges of a wound prevent proper healing. To assure clean smooth cuts, the tool used for pruning should be kept sharp and free of rust.

Most pruning around the home will be done with pruning shears. If these are of the scissors type, with blades that pass each other, there must be no "play" between the blades, or a clean cut cannot be made. That is one reason why, in making the Wiss "Hy-Power" pruning shears, we have used the "anvil" type of construction, in which only one cutting blade is employed. This cuts down upon a flat bed or anvil of softer metal, which holds the branch or twig in place. There is absolutely no part that can spring or wear out of alignment, either vertically or horizontally.

While the anvil type of pruning shears is best for general use, the shearing or scissors type, with two cutting blades, is preferred for some pruning where very close work is essential.

For thinning out old canes from shrubs, hedges, and small fruits, and for certain other pruning tasks, the long-handled pruning shears save time, effort, and the gardener's back.

If a pruning saw is used, it should be kept well sharpened, and occasionally "set" so that it will not bind in making a cut in live wood.

2. LEAVE NO STUBS.

The greatest single cause of delayed fatalities from pruning large branches of trees is "stubs" left by the pruner.

Any lateral or branch should be removed close to the

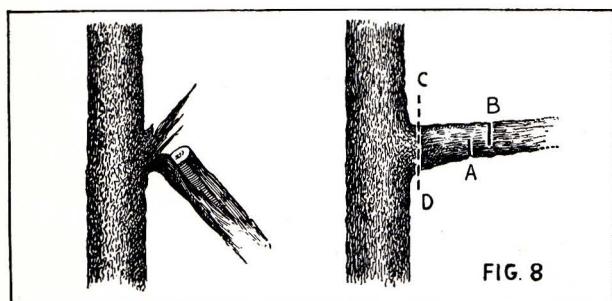
parent branch. The pruning cut should be made *parallel to the parent limb*, not at a right angle across the branch that is being removed. (See Fig. 12)

In removing a limb or a branch of considerable size, there is always a danger that the weight of the section being removed may cause it to break or split off before the pruning cut is finished. This leaves a very ragged wound, and may even rip the bark from the trunk, or the parent branch, for some distance below the section being cut off.

Such a mishap may be guarded against by making an under cut about a quarter of the way through the branch to be removed, at a distance of a foot or more from the parent trunk or limb. A second cut is then made, a few inches further out, from the top down. The severed branch will then fall without danger of stripping the bark. Then the remaining stub is removed by a *third* cut made close to the parent limb. (See Fig. 8)

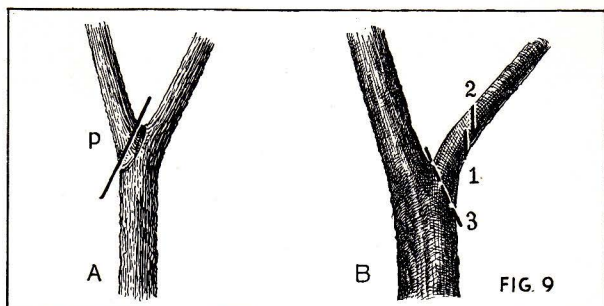
Crotches, in many trees, spell danger of future injury from storms, or from heavy crops of fruit. There are exceptions, of course. Some trees, such as the American Elm, are crotch-forming in their natural habit of growth, but in general crotches are to be avoided. An examination of the crotch will usually show a sort of swelling or collar at the base of the branch to be removed. The pruning cut should be made slanting, and follow this line (See Fig. 9-A). To do this, it is often necessary to cut *from the bottom upward*. This can readily be done if the branch is first severed, as described in the preceding paragraph. (See Fig. 9-B)

Even in cutting off very small branches, the principle of leaving no stubs should be carefully adhered to. Such



Cutting a large limb: At left, weight of limb has broken it before cut was finished; at right, three cuts, at A, B, and C-D, have prevented such an accident.

stubs may die back and eventually start decay that is concealed by the bark growing over it, thus leaving a weak spot that will cause later trouble.



Trees: Crotches, in most trees, result in future injury; forestall it by removing them. (B) If the crotch is formed by large limbs, cut with a stub first, and then remove the stub, cutting upward if necessary.

3. SELECT BUD POSITIONS WITH CARE.

We have already seen that the position of the buds determines the amount and direction of new growth.

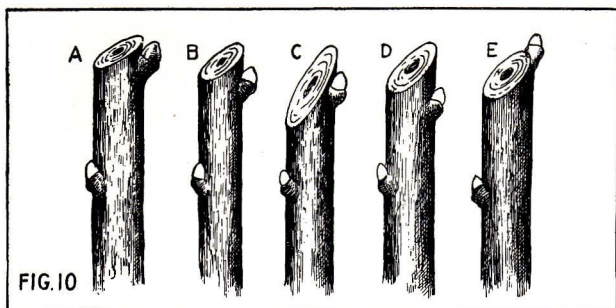
By careful observation of his plants, the wide-awake gardener can do much of his pruning *long in advance*. A snip with the pruning shears today, to cut off a small shoot, or even a bud removed with the thumb and finger, may prevent the necessity of removing a large limb a few years hence, and save the plant's energy that would have been expended in growing it. The pinching out of a bud is just as truly pruning as the sawing off of a big limb. It is safe to emphasize, as a general rule, that

*the earlier any needed pruning
can be done, the better.*

This applies alike to a tree, a shrub, an annual; or to an individual branch or shoot.

The necessity of avoiding "stubs" is important even when one is pruning a mere shoot or twig, which as yet possesses only buds instead of side branches. If the cut is made too far above the bud, decay or die-back may destroy the bud; if too close to the bud, the latter will dry out, especially in winter when the wound heals more slowly. One-eighth to three-eighths of an inch above the bud is the proper length to allow. The cut is made slightly

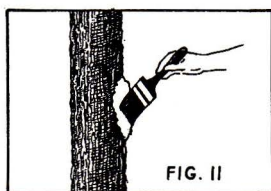
slanting, the lowest point being opposite the bud. (See Fig. 10)



Pruning cut in relation to bud: *Correct: A, for summer or green wood pruning; B, for winter or dormant pruning. Incorrect: C, too slanting; D, too far from bud; E, too close to bud.*

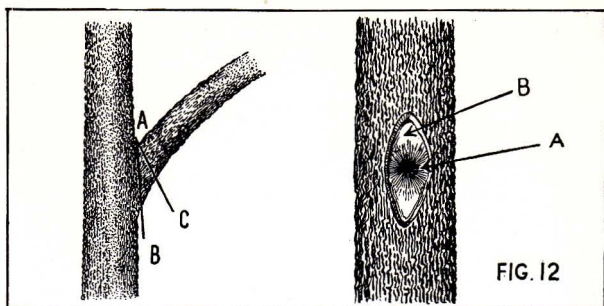
4. PROTECT LARGE WOUNDS.

Every open wound or cut presents a possibility of infection. In theory, therefore, every pruning cut should be protected by a covering. In practice, however, small wounds, if properly made, heal so quickly that no protection is given. For wounds 2 inches or more in diameter it is advisable to paint over the cut surface. Orange shellac is satisfactory for this purpose; or "tree wound paint," sold by most seed houses, can be used. An ordinary house paint is better than no protection at all. (See Fig. 11)



Protecting pruning wounds: *Cuts 2 inches or more in diameter should be protected with shellac or paint, renewed at intervals until the wound is well-healed.*

Of quite as much importance as painting is to make certain that there is *no loose bark at the edges of the wound*. Any bark that is not firmly attached to the wood beneath it should be cut away—with a sharp stout-bladed knife, or a carpenter's chisel—back to where it adheres firmly. The bark area removed should be round or oval, because cuts made straight across the bark on the branch or trunk will not heal properly. (See Fig. 12)



Trees: In removing a lateral limb, make the cut parallel to the main trunk (or parent limb) not at a right angle across the limb being cut off; see A, B, at left. Any bruised or loose bark around a pruning wound should be cut back to firm live tissue. Make an oval cut (B, at right above) as it will heal better than a rectangular one.

Pruning Equipment

By far the most important tool for the home gardener is a pair of high quality pruning shears. It is desirable to own two pairs, one for heavier work and another small enough to be carried conveniently in the pocket so that casual pruning may be done where necessary.

Wiss FH4 Flower Shears which permit cutting and holding the stem with one hand—one motion, are a very convenient tool for light pruning. For work among roses it is worth its weight in gold. (See page 40)

If there are hedges to be kept clipped to even surfaces, then hedge shears are essential.

A good pruning saw is needed if there is much cutting of large branches to be done. As this is likely to be a lifetime investment on any small place, it pays to get one of the best quality. The “bow” type will be found most useful for general purposes.

For high pruning, a pole saw—also of the bow type—will cut both small and fairly large branches. For that reason it is preferable to the pole pruning shears unless one can have both.

Care. Of all garden tools, pruning equipment deserves the best possible care. A dull or rusty blade will not make a clean smooth cut.

1. Keep pruning tools in a dry place.
2. After use, wipe with oil to protect from rust.
3. Keep all springs and joints well oiled.
4. Keep cutting edges sharp, and free from nicks.

SECTION 3

What and when to prune

Some beginners make the mistake of assuming that, if a little pruning is good for a plant, more will be better. On the contrary, the aim should be to do a minimum of pruning rather than a maximum.

This is accomplished, first of all, by *anticipating* pruning requirements, as already suggested.

Keep the buds under control, and later pruning will largely take care of itself.

The second point, in holding pruning to a minimum, is to conform as much as possible to the normal growth-habit of the plant being pruned. The more you try to alter the natural form or shape of a plant, the more pruning it will take to do it. That is why your Privet hedge must be constantly clipped.

Some plants will stand a great deal of pruning or clipping, others violently resent it. Hemlock, for instance, makes a nice clipped formal hedge, while Spruce and Fir are not amenable to such treatment. In general, fast growing, many branched plants, will stand more pruning than slow growing, sparsely branched ones.

When To Prune

Most plants can be pruned at any time of the year, but the best time, for the welfare of the plant, is *when the pruning wounds will heal most quickly*. This, with the great majority of trees and shrubs—in temperate climates—is during February to April, just before the sap begins to flow and new growth to start. The “callus” formed at the edges of the bark around the cut, and gradually growing over and concealing it, is then most rapidly developed.

There are, however, reasons why pruning at other seasons of the year is in some cases advisable. A Privet hedge, for instance, cannot be kept in good condition with only one clipping a year—the new growth made would be too long and too old.

Evergreens are best pruned while the new growth is still soft—during the summer months. Trees and shrubs which are in foliage can be “shaped up” more readily than when they are without foliage. *Where large branches are involved, it is a good plan to observe and mark them while in foliage, and then do the required pruning the following winter or early spring.*

Again, many shrubs (including some climbing Roses) flower only, or most freely, on new wood of the previous season’s growth, and these should be pruned immediately after flowering, so that the full energy of the plant can go into the development of new growths, the wood which has flowered being of no further use.

In the following pages such terms as *green* (or *summer*) pruning, and *dormant* (or *dry*) pruning will be encountered. These refer to the condition of the wood; in active growth, during summer, or with the sap inactive during the dormant season.

Old Wood is that of one or more season’s growth. In many cases, while still sound, it is of little further use for the production of flowers or new lateral growths. *Surplus wood* refers to branches or canes which overcrowd the plant, especially at the center.

Short pruning means severe cutting back—usually a half or more of the entire plant, as in the case of bush Roses.

Long pruning means leaving most of the top growth.

Heading in is a term used to designate moderate pruning of the ends of new growths.

Shearing and clipping are types of pruning in which no attempt is made to cut according to the location of individual buds or eyes, the entire surface being gone over. It is done with hedge shears rather than pruning shears.

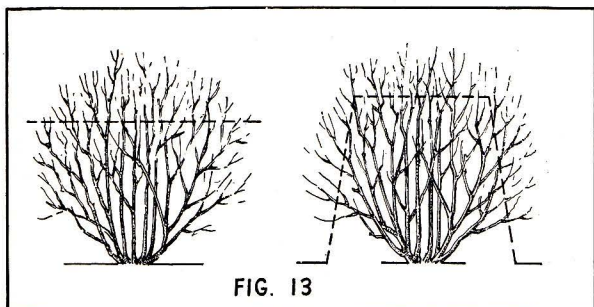
With these general considerations in mind, we are now ready to go out into the garden and tackle the specific pruning problems there awaiting us.

Hedges

Hedges are of two general types, formal and informal. The former are kept closely clipped to conform to very definite dimensions, the latter allowed to grow more or less at will, according to the natural growth-habit of the plant used, but still controlled to some extent.

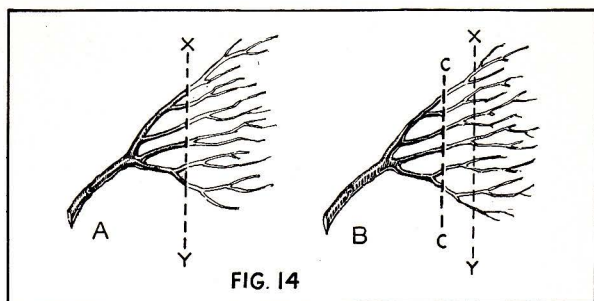
With formal hedges, pruning should begin soon after the plants are set out. Most amateurs make the mistake of allowing the plants to grow up to the height desired before starting to prune. This results in sparse branching at the bottoms of the plants. If a hedge 4 feet high is wanted, pruning back the tips should be started when they have reached a height of 24 to 30 inches, removing 6 to 12 inches of growth. (See Fig. 13) If larger plants are set out, they should be cut back to 12 or 15 inches at planting time. The laterals also should be cut back to induce a dense twiggy growth.

In reforming an old neglected formal hedge, or one that has been severely killed back, two courses are open. Either it can be cut back to a few inches above the



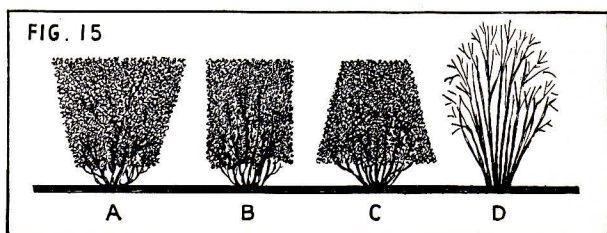
Pruning the new hedge: Cut back top growth before it reaches height desired for hedge; shearing of sides should also be started early.

ground, and treated like a new planting; or the main stems and laterals can be pruned back to 6 inches or more *inside* the desired dimensions, sides and top, to secure a thick twiggy growth where the ultimate trimmed surface will be. (See Fig. 14)



Refacing an old hedge: Instead of cutting branches where new surface is desired (line X-Y, in A), cut back to line C-C, so that new growths can be cut at X-Y.

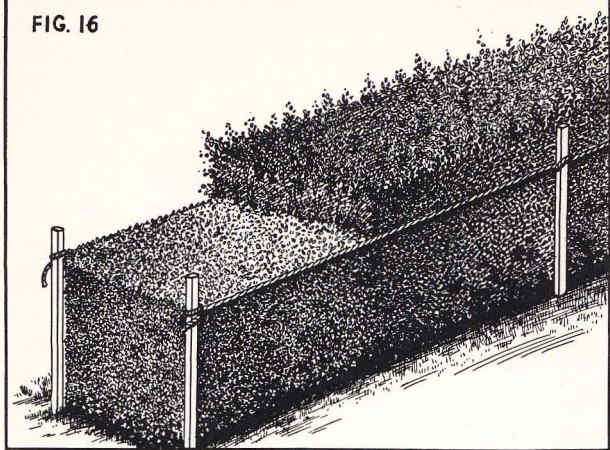
Care should be exercised to keep the sides of formal hedges either perpendicular, or sloping slightly *out* at the base. If the base is narrower than the top, the lower parts of the plant will make weaker growth. (See Fig. 15) In establishing the dimensions of a hedge, or in keeping them true after full size has been attained, a garden line, stretched between stout stakes, will be found helpful. (See Fig. 16)



Cross-sections of formal hedge: A, incorrect, growth at bottom will be weak; B, vertical—better; C, slightly broader at bottom, still better. D, informal hedge, merely trimmed to a neat appearance.

Most plants—suitable for use as hedges—with the exception of evergreens—can be pruned or trimmed at any time. Ordinarily a pruning in late spring or early summer, after considerable new growth has been made, and again in late summer or early fall, will maintain them in good form.

FIG. 16



A garden line, stretched between stakes, makes for accuracy in shearing the formal hedge.

Informal hedges require comparatively little pruning. If they are to be held to a certain height, the main shoots should be cut well below that mark. Some lateral branches will tend to grow out beyond their fellows, and these are cut back to within the outline of the plant, so the cut ends will not show.

Pruning Roses

In growing Roses it is well to remember that “the queen of flowers” is really a shrub—which remains in active growth the year round. In moderate climates the wood of previous years’ growth lives through the winter in a more or less dormant state and (if permitted to remain on the plant) throws out new growth at the beginning of each growing season. In areas where winters are severe, much or even all of the living wood may suffer winter injury or winter killing to, or just above, the soil line where plants have been “hilled up” with loam or compost for protection. With correct pruning, a profusion of fine flowers can be had each year, whether Roses are being grown in a mild or a cold climate. Rose bushes left entirely unpruned will produce small poorly formed flowers on bushes made unsightly by much dead and dying wood. (See Page 20) The small, “Lightweight” pruning shears (See Page 44) are especially convenient for most Rose pruning.

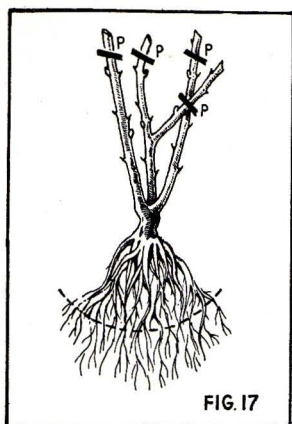


FIG. 17

Bush Rose pruned for planting: Tops cut back to a few eyes; broken or bruised roots cut back to firm wood; long roots trimmed in.

In general, Roses are pruned for two reasons:

1. To shape the plant so that the most promising flowering branches are strengthened, and given room to grow and produce bloom. This process in-

cludes cutting out dead wood; shortening dying or weak wood to the point where the branch remains healthy; and removing excess healthy wood to permit that which remains to grow more strongly.

2. To improve the quality of the flowers permitted to develop by (a) shortening some of the flowering shoots, and (b) by "disbudding" or removing some of the small buds, so that those which remain may produce larger and more beautiful flowers.

Thinning Out. Except for *Climbers*, which will be discussed separately, all Roses need an early spring thinning out. In warm climates this is done while the plants are dormant in middle or late winter.

Remove all dead and diseased wood to the ground, and cut back dying canes to a point just above a healthy vigorous outside bud on clean strong wood. Leave only the strong healthy canes produced the previous year if you want to keep your Roses vigorous.

Dr. Nicolas, the great Rose hybridizer, says in his *Rose Manual*:

"A Rose bush, to retain its vigor and produce blooms of high quality, must be kept young . . . its upper structure should never be older than two years, and one year would be better, regardless of the age of the roots."

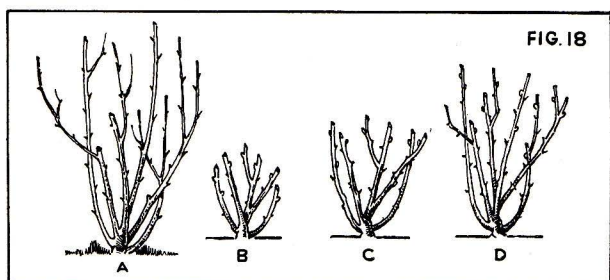
Pruning Hybrid Teas and Floribundas. The Hybrid Tea is the Rose type most generally grown, because of its monthly bloom throughout the growing season, and its hardiness as compared with Tea Roses.

In addition to the early spring or late winter thinning out described above, Hybrid Teas need a more severe

pruning after the last hard frost, when you feel reasonably sure that spring has arrived. It is important to wait for settled weather for this pruning, because new growth will start from each bud left at the pruning point, and a late frost after this tender growth starts, may kill back the young shoots which are destined to produce June flowers.

The healthy year-old wood left after early thinning out must be pruned at this time to assure satisfactory bloom. In general, weak plants are pruned low, and very vigorous ones more lightly.

Low Pruning. If your object is to secure a few very fine large blooms for exhibition purposes, prune your Hybrid Teas severely. (See Fig. 18) Leave no more than three or four healthy year-old canes and cut them back to three eyes or buds above the ground level. Make each cut just above a healthy *outside* bud to produce a bush with an open center, which will admit sunshine and a circulation of air. From these outside buds, the new growth springs up quickly.



Roses — spring pruning: A, plant before pruning; B, hard pruning, for longest stems and largest blooms for exhibition; C, moderate pruning, for low bushy plants and more bloom; D, high pruning, for show in the garden or landscape effects, but not so good for cut flowers.

For exhibition blooms, side buds are removed as they form, and only the long straight-stemmed terminal bud on each cane is permitted to develop.

When cutting these blooms, always leave at least two buds below the cut and, if possible, cut the flower stem just above an outside leaf stem. In removing faded flowers which have died on the plant, cut just above the first healthy outside spray of foliage. This cutting of blooms constitutes all necessary summer pruning.

Long Pruning. If you want a profusion of blooms on your Hybrid Teas rather than a few exhibition flowers, longer pruning is indicated. Leave six or seven eyes on each cane instead of three, and when flower buds appear on the new wood, do not disbud but let them all develop. In cutting flowers and removing dead blooms, proceed as directed in the paragraph above.

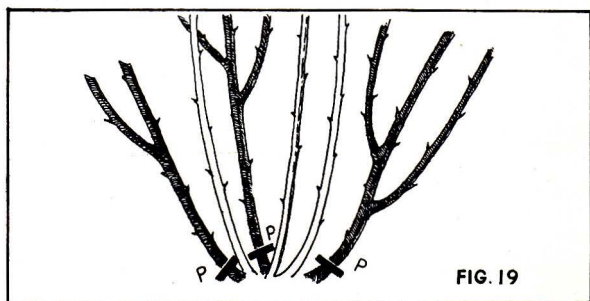
Light Pruning. In warm climates where old wood lives over winter, or in the north, when dealing with a very vigorous Hybrid Tea variety—like Peace, for instance—light pruning is sufficient if you want many moderate sized flowers.

In this case, keep all strong healthy wood, and remove only the cane tips and side twigs which are dried or unhealthy. Flowers are cut as directed under *Low Pruning*.

Pruning Hybrid Perpetuals. Hybrid Perpetual Roses are grown chiefly in climates which are too severe for the Hybrid Teas. Though iron-hardy, and very floriferous, they produce bloom in June only, and are therefore not popular in areas where the everblooming Hybrid Teas can be grown successfully.

Hybrid Perpetuals are extremely vigorous with strong heavy canes. Low pruning produces the best results in this type. If you have an old neglected specimen in which much old wood has been retained, cut it all back, leaving only three eyes above ground on each strong cane, and remove entirely any weak canes which may have developed.

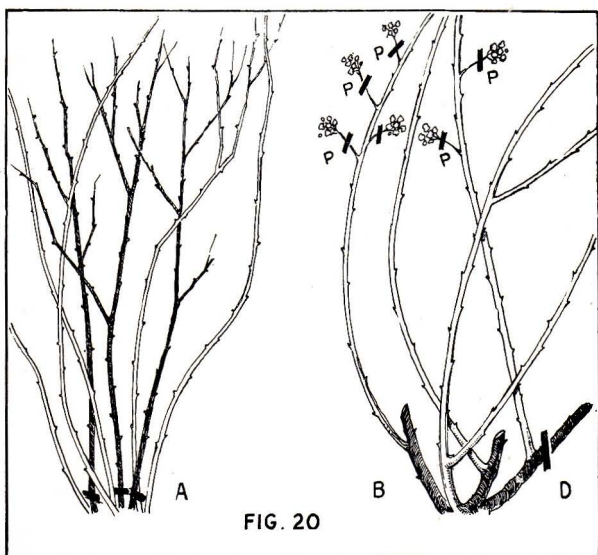
In pruning a young Hybrid Perpetual plant, remove all weak ones entirely, and prune strong vigorous canes to six or seven eyes above the ground, always cutting just above an outside bud.



Roses—Rugosas and Shrub Types: Oldest wood is cut out, back to ground when plants become overcrowded.

Pruning Small-flowered Polyanthas, Shrub, Rugosa and other Species Roses. These vigorous "toughies" of the Rose family need only an annual thinning out of old and weak wood. Shorten the healthy canes slightly to shape the plants as desired. If the time comes when very dense growth affects the production of bloom, these types can be cut to just above the ground level and given a heavy feeding of complete fertilizer. They will soon spring up with renewed vigor. (See Fig. 19) Very early spring—before growth starts—is a good time for this type of pruning.

Pruning Climbers. Climbers are of two general types: Ramblers or small-flowered Climbers, and large-flowered Climbers, which embrace many modern long-stemmed varieties including the Climbing Hybrid Tea. Pruning practice is different for each type. (See Fig. 20)



Roses—Climbing Types: Small-flowered "Ramblers" (A) cut old canes to ground after flowering in June or July to make room for vigorous new canes that will bloom next year. (B) Large-flowered climbers flower on laterals from old wood, require little pruning except to cut out laterals that have flowered (P, P) and oldest stems, (D) when growth becomes too crowded.

The *Rambler* or small-flowered type includes such old varieties as Dorothy Perkins, and such new improved ones as Chevy Chase. Bloom in this type is entirely on new wood. Consequently, heavy pruning is done im-

mediately after bloom, when all the canes which have flowered are removed to the ground, or to a point where a strong young shoot sprouts from the old wood. In spring, the only pruning needed is to remove canes which have sustained winter injury, and to head back any strong young canes which have grown out of hand.

The *Large-flowered Climbers* produce clusters of large blooms (or, in some varieties, single flowers) on strong, long-stemmed side-shoots rising from older wood. Old canes should therefore never be removed during dormancy unless they are actually dead. Old living canes which appear half dead in winter will probably revive in spring and throw out flowering stems or vigorous branches which in time will produce flowering stems.

If the plant must be pruned because it is too rampant, it is better to remove brand new canes than the old ones, which can be counted on to produce flowers.

Pruning large-flowered Climbers, therefore, consists simply in (1) cutting out dead wood or winter-killed cane tips, and (2) after flowering, in clipping back each flowering stem to just above the second eye from the main stem. This encourages a second blooming period, for most of this type are intermittent bloomers.

Shrubs

Ornamental shrubs grown for their flowers or berries or both, are pruned in late winter or early spring if the flowers are borne *on wood of the current season's growth*, or if showy berries in autumn make it undesirable to prune after flowering. Except for berry bearers, flowering shrubs which *bloom on year-old wood* are pruned immediately after flowering.

The following lists include the most popular garden shrubs.

Prune After Flowering (Blooms appear on Year-old Wood)

Akebia	(<i>Beautybush</i>)
Azaleas (<i>Hardy Ghent, Mollis</i>)	Lonicera fragrantissima
Calycanthus floridus	(<i>Bush Honeysuckle</i>)
(<i>Strawberry Shrub</i>)	Magnolia
Caragana (<i>Siberian Pea</i>)	Philadelphus (<i>Mock-orange</i>)
Cercis (<i>Red Bud</i>)	Prunus (<i>Fl. Almond</i>)
Chionanthus (<i>White Fringe</i>)	Rhododendron
Cornus (<i>without berries</i>)	Ribes (<i>Flowering Currant</i>)
Cydonia (<i>Jap. Quince</i>)	Rosa (<i>See Rose Pruning</i>)
Cytisus (<i>Broom</i>)	Spirea, Spring-flowering
Deutzia	Syringa (<i>Lilac</i>)
Exochorda (<i>Pearlbush</i>)	Tamarix (<i>Spring-flowering</i>)
Forsythia	Viburnum carlesi
Hydrangea hortensia	Viburnum lantana
Kalmia (<i>Laurel</i>)	Weigela
Kolwitzia amabilis	

Prune In Late Winter or Early Spring (Blooms appear on current year's growth or shrubs bear decorative berries in autumn)

Abelia	Lagerstroemia (<i>Crape Myrtle</i>)
Acanthopanax	Ligustrum (<i>Privet</i>)
Berberis (<i>Barberry</i>)	Lonicera (<i>Berried</i>
Buddleia (<i>Butterflybush</i>)	<i>Honeysuckles</i>)
Callicarpa (<i>Beautyberry</i>)	Lycium (<i>Matrimony-vine</i>)
Ceanothus	Rosa (<i>See Rose Pruning</i>)
Clethra	Rhus (<i>Sumac</i>) (<i>Smoke Tree</i>)
Hibiscus (<i>Rose-of-Sharon</i>)	Spiraea (<i>Summer-flowering</i>)
Hydrangea arborescens	Stephanandra
<i>H. paniculata grandiflora</i>	Tamarix (<i>late-flowering</i>)
others	Viburnums (<i>berry-bearing</i>)
Hypericum	Vitex (<i>Chaste Tree</i>)
Kerria	

Prune Lightly in Spring, and After Bloom

Cornus alba siberica
(Coral Dogwood)

Cornus mas
(Cornelian-Cherry)

Cornus paniculata
(Gray Dogwood)

Cornus sanguinea
(Blood-twigg Dogwood)

Cornus stolonifera
(Red Osier Dogwood)

Lonicera (Honeysuckle)

Spiraea bumalda

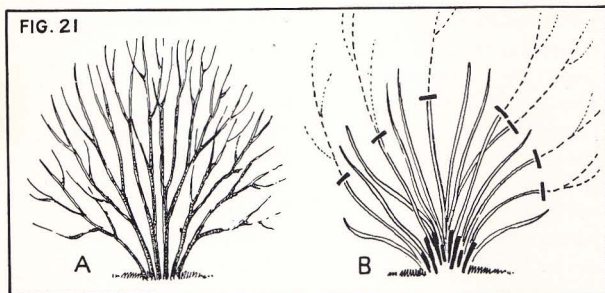
Symphoricarpos (Snowberry)

Viburnum tomentosum

Viburnum opulus

Weigela

In pruning shrubs of informal habit, the object is to keep the plant in bloom and at the same time to preserve its graceful habit of growth. This is best accomplished by (1) removing all very old wood and (2) by cutting back the branches which have bloomed to uneven lengths. In doing so, preserve in general the original shape of the shrub. New growth will follow similar lines. An informal shrub, the branches of which are chopped off to a uniform length, usually throws out long straight whips from the stubs, and these ruin the shape of the plant. (See Fig. 21)



Shrubs: In general, should be allowed to assume natural habit of growth, as at A. When growths become tangled and overcrowded, cut out annually a few of the oldest canes back to ground. Long straying branches are cut back to keep plants reasonably uniform.

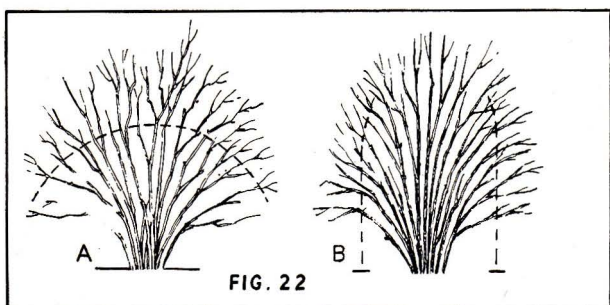
A shrub which naturally has a compact, formal growth habit like the Abelia or Regal Privet, is easily kept in control by pruning away any "wild" shoots which develop beyond or above the desired outline.

Lilacs are easily kept in control by removing, in the spring, old dying wood and suckers or new shoots from underground; and clipping off the blooming twigs immediately after flowering. This is also true of Azaleas, Buddleia, Kalmia, Magnolia, Rhododendrons and Stephanandra.

Hydrangeas of different types must be pruned differently. *H. arborescens* can be cut to the ground each spring. *H. paniculata grandiflora*, or "PeeGee," is also pruned in spring. All branches can be cut just above the second bud or eye, thus producing strong shoots and large flowers. For a more graceful plant with smaller flowers, cut the year-old branches back one-third their length. With French Hydrangeas which produce flowers on new shoots rising from year-old wood, simply remove flower heads after bloom and cut back any winter-injured tips in spring.

Prune Rose-of-Sharon or *Hibiscus syriacus* in the spring by cutting back year-old shoots one-third their length. This preserves the natural habit of growth.

Shrubs grown for their bright bark, like the Yellow and Red Stemmed Dogwoods, should be pruned each summer by removing all the oldest wood to the ground, and again lightly in spring, in order to encourage new, highly colored shoots. (See Fig. 22)



Shrubs: A, how not to prune a shrub. This "crew haircut"—often seen—removes the flower buds at the tops of shoots and destroys natural grace of plant. (B) Shrubs that must be confined in space can be pruned in along vertical lines, and still provide hedge-like uniformity.

Many of the hardy deciduous and broad-leaved evergreen shrubs are so persistent that neglected specimens can be sheared off completely a few inches above the ground in order to produce new vigorous growth. Shrubs which will endure this treatment include Abelia, Box, Buddleia, Forsythia, Kalmia, Lonicera, Lycium, Myrica, Privet, Sumac and Tamarix. If this "removal" treatment is spread over two or three years, removing part of the old growth each season, the temporary gaps in the planting will be less obvious.

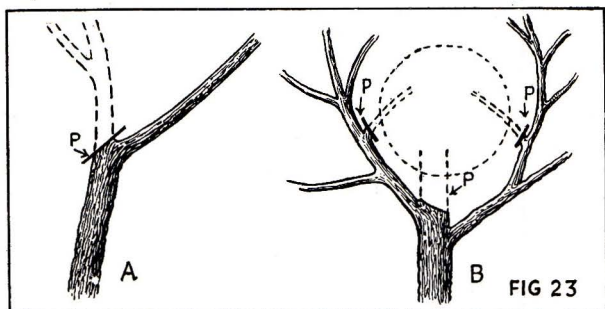
Trees

Shade Trees. The shade trees which beautify your property are valuable assets, and deserve the best of care. Correct pruning and after-care are essential to the health of such specimens.

Each year all dead, dying or diseased wood must be pruned away to prevent decay from spreading to the sound part of the tree.

Branches which cross and rub against others are removed both to improve the appearance of the tree and because constant rubbing will cause injury to the bark through which insects and disease may enter.

Sometimes live branches are removed to admit the passage of telephone wires (See Fig. 23), because they touch the house roof, or to admit more sunlight and air to other limbs when growth is too dense. Limbs tending to form a crotch should be removed (except in species such as the elm, the nature of which is to form crotches) because these are liable to storm damage. Crotches are also pruned out to prevent trees from developing a double leader (See Fig. 9). Pruning of live wood should always be done when the tree is dormant, unless storm injury makes an emergency operation necessary.



Trees: Direction of future growth may be changed by removing main trunk—as in A—and inducing a branch to take its place. B shows “tunnel” pruning to allow passage of telephone wires without destroying tree.

Trees on small properties, or on streets often must be pruned to keep them from giving too much shade to other parts of the garden, or to prevent branches or tops from interfering with vehicles or wires. The removal of many small branches is, in these cases, preferable to butchering the tree by lopping off many large limbs or by complete topping. Such drastic treatment may result in sun

injury to the bark. Then too, lopping back or severe topping is apt to be a shock very hard for the tree to sustain, as there will be many large wounds to be healed at one time.

Evergreens

Pruning evergreens presents a different problem from that of deciduous trees and shrubs. The conifers particularly must be pruned with care because usually they cannot produce new buds along existing branches. Consequently, when pruned, new growth must all come from the buds already formed at the time of cutting. For this reason, Hemlocks, Pines, Spruces and Firs are pruned, when necessary, after new growth has appeared. The process involves removing only a part of the new growth. If the branch was cut back to old wood, no new buds would develop to cover the bare spot, and the old stub would be there for the life of the tree.

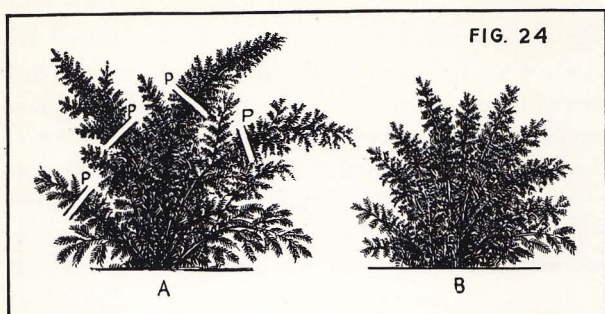
Arborvitaes, Junipers, Retinisporas and Yews *can* produce new buds on old wood. They are therefore preferably pruned just before new growth starts.

Trees. In general it is a good rule to let an evergreen tree retain its own graceful form rather than to try to shear it into an unnatural formal outline. When such shearing is carried out in order to develop a specimen of formal shape, yearly pruning with a hedge shear is necessary. All "wild" growth outside the desired outline is removed and the tree lightly pruned on all sides to retain the desired shape. This should be done after the new growth appears unless Arborvitaes, Junipers, Cypressess or Yews are used for the purpose. These are the evergreens best suited to shearing, though Hemlocks can be successfully sheared, especially for hedges.

Specimen evergreen trees which are permitted to grow naturally need only have dead or injured branches removed. If Spruces, Pines and Firs, which are naturally pyramidal in form, develop "wild" branches which do not conform with the general outline, these can be pruned back, on new wood only, to the length of the majority of the branches. The sooner it is done the better, and if seen in time, very small pruners or even the fingers can be used to pinch out the central bud of the new growth which threatens to make an over-long branch. The current year's bud left at the end of the branch will throw

out a straight growth in line with the original direction of the branch. In a year or two there will be no evidence left of the work of the pruner. (See Fig. 24)

Do not remove the lower branches of Firs, Hemlocks, Pines and Spruces unless dead wood is present. With naked trunks these trees look stiff and ungraceful.



Evergreens: Low-growing, branching types (such as many Junipers and Yews) can be kept in compact forms, as at B.

For Size. Sometimes pruning is needed to keep an evergreen tree within a certain size. This may be done more easily with Cedars, Junipers and Hemlocks than with Firs and Pines.

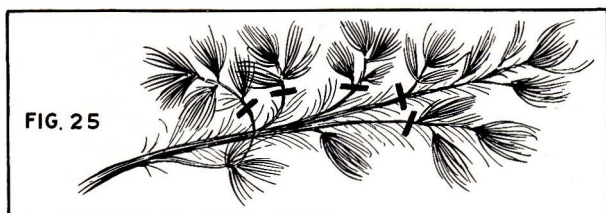
If you can anticipate the need for pruning back, before the tree grows too tall, you need only cut back the main stem to well below the height which you wish the tree to attain ultimately. New growth from smaller branches will gradually fill in the space. The final result will be a tree of unusual sturdiness and thickness.

For Injury. Occasionally an ice storm may break the leader out of a Spruce, Fir or Pine; or it may be destroyed by insects. In this case, select the strongest shoot below the break and fasten it in an upright position by tying it to a splint or stake. The shoot will form a new leader in a year or two.

Side branches, too, sometimes sustain winter injury or are destroyed by pests. These must then be pruned away to sound wood.

Evergreen Shrubs. Evergreen shrubs like the Pfitzer Juniper may develop growths too ungainly to suit the positions which they occupy. Before new growth starts, prune back such branches, without, however, destroying the general natural shape of the shrub. (See Fig. 24)

Other dwarf specimens like the Mugho Pine which is naturally globular in shape, may throw out long straight new growths which destroy the natural symmetry of the plant. To restrain too vigorous new growth of this sort in Pines and Spruces, prune back the current season's growth lightly as shown in figure 25. *Do not prune back to old wood*, but remove only part of the new growth. (See Fig. 25)



Evergreens: *Species and varieties that make vigorous new growths at the tips of side branches may be cut back in summer just after the new growth has been made.*

Broad-leaved Evergreens. Broad-leaved Evergreens do not need much pruning. They are informal in shape and should be permitted to remain so.

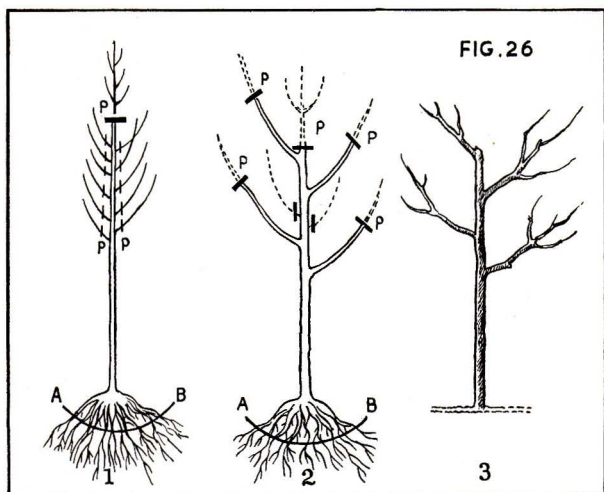
Cut off the dead flowering twigs after blooming, and remove any dead or dying wood. Very old, gangling or unthrifty Abelias, Azaleas, Box, Laurel or Rhododendrons may be sheared to just above the ground and will then throw up vigorous new shoots.

Root Pruning. If it becomes necessary to transplant an evergreen, prepare for it in advance by pruning the roots six months before the tree or shrub is to be moved. With a sharp-bladed transplanting spade, drive straight into the soil in a complete circle around the specimen. The circumference of the circle should correspond with the size of the root ball which is to be taken up with the tree. By pruning the roots at this point, new small feeding roots will be developed near the trunk to replace the long severed roots. These will help to nourish the tree after transplanting.

Fruits

The proper pruning of fruits is vital to their general health and yield. From the moment of planting until the tree is discarded, pruning must be resorted to annually.

The paragraphs which follow give the main points of fruit tree pruning; but for those who are growing a considerable number of fruit trees it is advisable to make a deeper study than can be offered in this limited space. Get an authoritative book on orchard fruit culture which contains a thorough discussion of pruning.



Pruning a young fruit tree: At 1, A-B, broken or bruised roots cut back; P, P, leader cut back, and side branches cut to three eyes (lateral buds); 2, two-year old tree, pruned for planting; 3, same tree a year later, after second pruning.

Orchard Trees. Before a young fruit tree is planted, prune off any bruised or broken roots, and cut back the main mass of roots about one-third their length (See figure 26). With year-old trees, remove all side limbs to just above the third eye or bud from the main stem, and cut back the main stem one-fourth its length, making the cut just above a strong bud. This method is called pruning to a "whip." (See Fig. 26-1)

When planting two or three-year-old trees, prune the roots as above, but leave three or four of the best branches, symmetrically arranged, cutting them back to within four to eight buds of the main stem. Cut back the top of the main stem to just above the topmost remaining branch. In selecting branches to be retained, get an even distribution and avoid crotches. (See Fig. 26-2) If the tree is to be pruned to make a low head which can be easily sprayed, and from which fruit is easy to harvest, retain branches not more than 1½ to 2 feet from the

ground. If the head is to be higher, as in fruit trees planted as lawn specimens, leave the topmost branch 2 to 3 feet above ground.

The next spring, begin to prune to shape your tree. Four to six branches from trees started as whips, are selected to form the future tree. Others are removed. Larger trees which have been pruned at planting as described in the previous paragraph, are pruned by cutting back one-half of the new branch growth on branches left at planting. Leave two to four eyes on new side shoots which you wish to retain. Unwanted new wood is cut back clean to the main stem. (See Fig. 26-3)

From this time on, fruit trees are pruned

1 to produce an open head which admits sunlight and air to the fruit.

2 to remove all cross branches which rub against others.

3 to remove all "suckers" or straight young shoots springing erect from the base, or from side branches of the tree; and

4 to remove all dead, dying and diseased wood.

Small Fruits

Grapes. Many home gardeners have grape vines which must be pruned yearly. For maximum yield, this operation must be done correctly and at the right time of year.

To avoid bleeding, grape pruning must be done while the vines are fully dormant. Late winter is the best time to prune, as at this season, winter injury can be detected and weakened vines removed.

With young vines of two or three years' growth, select a long cane to form the main trunk, and train this to the upper bar of the trellis, cutting it above an eye at that height. Leave two side shoots or spurs near the upper bar, cutting them back just above the third or fourth bud. From these spurs will spring the new canes for the coming season. Select also two side shoots near the lower bar and cut them back to spurs in the same way. Remove all other side shoots close to the main stem. (See Fig. 27-A)

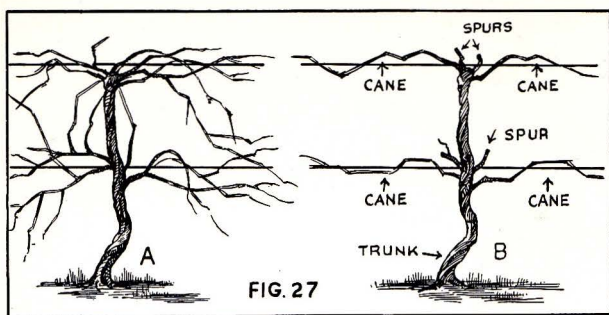


FIG. 27

Pruning grape vine: A, at end of season, before pruning; B, after pruning, in late winter.

As grape vines mature, pruning is less severe. At the end of the next year, select four more canes which can be readily tied to the trellis. Cut each back to eight buds and fasten them in position. Remove all unwanted canes.

From this time on, prune by removing all wood except four canes of the previous year's growth, cut these back to eight or ten buds, and fasten to trellis. (The canes selected may spring from the spurs provided the previous season. (See Fig. 27-B)

In pruning old neglected vines, cut the main trunk back to the ground. When new shoots spring up, prune as with two-year-old vines. Or remove the main trunk and select an existing young cane to be developed into a new trunk.

On Arbors. Grapes grown on arbors cannot be pruned so severely as those trained on trellises. However, they should not be left year after year to form a tangled mass of growth. One-half of the total growth of smaller lateral canes can be removed each year, cutting them back to the main or skeleton branches.

Cane Fruits. Prune *Blackberries*, after harvest, by removing all canes which have fruited. In spring, cut back side branches to 15 inches. In June pinch out the tips of new shoots at a height of 36 inches to encourage branching.

Raspberries are pruned as follows: In fall after last harvest, remove all canes which have fruited. In early spring, cut back year-old canes, one-fourth their length. Remove weak canes entirely, leaving those that remain six inches apart. Remove all unwanted suckers with a hoe.

Bush Fruits. Established *Blueberry* bushes are pruned in late fall or winter. Remove dead and weak wood and twigs, and head back strong young fruiting shoots to two or three buds.

Red Currants and *Gooseberries* only need to be relieved of the canes which are 4 years old or more. Cut out canes which are so low growing that they lie on the ground when in fruit; also weak canes and dead or dying wood.

Perennials

We do not usually think of pruning perennials, yet these faithful garden subjects profit by judicious "cutting back" and the removal of dead flower stalks.

Cutting Back. Many perennials (and some annuals, as well) can be improved by "pinching back" or shortening the young shoots early in the season before buds are formed. This strengthens the plant, causing side shoots to form, and creating a shrubbier and more sturdy growth. Due to branching, more flower buds are produced, too.

Among the perennials which profit most from cutting back, are such late bloomers as Hardy Asters and Chrysanthemums. If tall-growing Asters are cut back to waist height in early June, they will branch and produce strong plants, able to support themselves with little staking when blossom time arrives in the fall.

In the case of Chrysanthemums the new shoots are cut or pinched back several times to induce branching. The last topping of the plant can be made as late as mid-July. In addition to this, finer blooms will be produced if many of the new shoots springing from the crown of the plant are removed entirely in early spring. Four good strong shoots are enough to leave. By the time these have been pinched back several times, they will produce a strong bushy plant.

To spread the season of bloom, cut back some of your branching perennials in spring, so that they will come into bloom later than others of the same species, which have not been pruned. In this way you will have a succession of bloom from Phlox, Gaillardias, Shasta Daisies, etc.

Removing Flowers. It is a good general rule to remove flowering stalks or flower heads as soon as perennial bloom is over. In the case of plants like Delphiniums, the removal of the blooming spikes is necessary if you are to get a second blooming period. With others, like Peonies, Daylilies, Iris, Tritoma or Astilbe, the removal of the dead flower stems is a matter of sanitation and good garden practice. With perennials in the composite family, like Dorinicum, Gaillardia, and Chrysanthemum, the flower heads alone are snipped off. To assure repeated bloom, dead flower heads must be removed from Iceland Poppies, Stokesia, Platycodon, Dianthus and the like.

Though dead perennial foliage may be left on the border through the winter to form a natural mulch, in spring all dead stems and foliage should be neatly cut away and removed to the compost heap.

Pruning Calendar

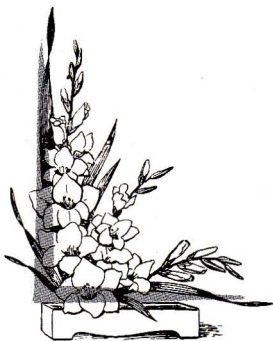
JANUARY	} Dormant pruning: shade trees; fruit trees; grapes; bush fruits
FEBRUARY	
MARCH	Early in the month before sap begins to run, dormant pruning as in January and February. Shrubs blooming on new growth (See page 25) <i>Rosa rugosa</i> and Hybrid Perpetual Roses.
APRIL	Hybrid Tea and Floribunda Roses after danger of hard frost. Roses and shrubs as in March.
MAY	Shrubs which bloom on old wood (See page 25) as soon as they finish flowering. Disbud roses for larger blooms. Prune out winter-kill on shrubs, trees, etc.
JUNE	Other shrubs when blooming is finished, as in May Pinch out unwanted new growth on fruit trees, grapes. Pinch back hardy asters, chrysanthemums. Pinch back annuals to induce branching. Shape young trees, deciduous and evergreen. Prune espaliered fruit trees. Disbud annual and perennials to produce large flowers.
JULY	As in June. Prune Ramblers (See page 23).
AUGUST	As in June. Prune off flowering stems of large-flowered Climbing Roses (See page 24).
SEPTEMBER	As in June, July and August. Head in new growth on fruit trees and shrubs. Remove fruited canes of Cane Fruits when thru bearing.
OCTOBER	Finish removing the canes of cane fruits which have produced berries. Prune back rampant growths of roses, fruits, shrubs.
NOVEMBER	} Dormant pruning of orchard trees, late-flowering and berried shrubs, etc. Remove dead flowers and flower stalks of late-blooming perennials.
DECEMBER	

SECTION 4

Basic flower arrangements

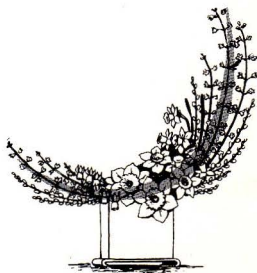
The love of flowers, a desire to feast on their beauty and an urge toward self-expression are the primary reasons for flower arrangements. Although the casual person may prefer to thrust a bunch of flowers into the nearest vase at hand, letting "nature take its course," a little planning will be extremely rewarding. The plan should be based on appropriateness of the flowers, location of the arrangement and, to a degree, the type container available.

With the knowledge of classic designs, and the rules implied well in mind, plus a little common sense, you can let your imagination go — and enjoy the results!



Right Angle Triangle is an effective, popular design, and easy to arrange with a minimum of flowers. The weight of the blooms should be concentrated at the base or corner of the right angle. Let the buds and tapering foliage emerge from this point. A heavy needle-point holder will secure the flowers satisfactorily in a shallow container.

The Crescent is a good design for the low squat container. It is a gay arrangement, and is very effective with the most informal flowers. Keep the weight just off center. Curved branches of decorative foliage are helpful in achieving this effect.





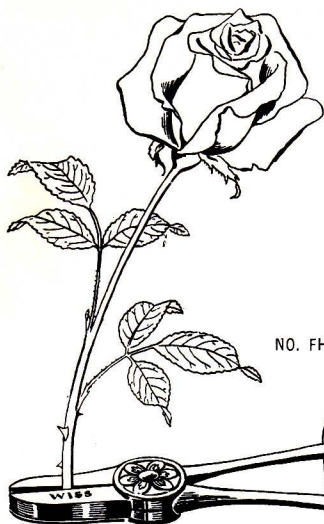
The Rhythmic Line curves upward from the center of the vase and does a reverse curve downward over the side center. The focal point should be around the mouth of the vase by grouping a few larger flowers or those of stronger hue. A tall container is the most satisfactory for this type of arrangement.

The Completed Triangle is classic in its symmetry. Tapering in the middle it extends equally on either side. The outline is traced with the more delicate flowers and foliage, the larger and deeper hued flowers building up from the center.



The Oval is an old-fashioned design with much charm. Ideally it should be arranged in a footed vase. The outer edges of the oval should be light and lacy, and a focal point of large flowers established down low near the center.

Flower Shears by **WISS**



WISS FLOWER SHEARS cut and hold a flower with one hand — in one motion!

USE LIKE REGULAR SHEARS to cut stem diagonally. This insures longer lasting flowers.

NO. FH-4

SECTION 5

How to keep cut flowers fresh

Anemones. Add vinegar to the water, at the rate of $\frac{1}{2}$ cup vinegar to 2 cups water.

Asters. Place cut stems in quart of water and teaspoonful of sugar for one hour.

Azaleas. Burn stem ends over gas or candle flame, place in water.

Apple Blossoms. Cut in bud stage — crush stem ends. Place in cool water with 2 drops hydrochloric acid to 1 qt. water.

Bleeding Heart. Two tablespoons of table salt in 2 quarts of water.

Calla lilies. One-half cup vinegar to 2 quarts of water. The leaves should lie flat in water to cover them.

Calendulas. Cut in bud stage. Use ice cubes in arrangement.

Camellia. Same treatment as Gardenias. Water is absorbed only through the petals and leaves.

Carnations. 5 drops of oil of peppermint in 2 quarts of water, or $\frac{1}{2}$ cup of boric acid in 1 gallon of water.

Cat-tails. Cut with few leaves about August 25th. Place in vase upright, no water.

Chrysanthemums. Crush or burn stems up 2 or 3 inches. 8 drops of oil of peppermint in 2 quarts of water.

Daffodils. Place stems in one inch of water in cool place. Squeeze gelatin-like substance from stems before placing in water.

Dahlias. Burn stem ends and stand for two hours in 1 quart of water with 1 teaspoonful of wood alcohol.

Daisies. 8 drops of oil of peppermint in 1 quart of water, or burn ends and soak in cold water for one hour.

Delphinium. Crush stem ends and plunge into water containing one tablespoonful of wood alcohol to 1 quart of water.

Dogwood. Crush stem up two or three inches or cut the stems. Peel off outer skin.

Forget-Me-Nots. Plunge stem tips into boiling water then into cold water. Protect blossoms from the steam.

Fuchsias. Place in two tablespoonfuls of table salt to two quarts of water.

Gardenias. Spray flowers with water; place in box in refrigerator; table salt sprinkled over blossoms keeps them.

Gladiolus. Place in cold water. To make the tops curve, soak over night and curves will develop.

Hellebore. Crush stem ends up two or three inches and place in 1 pint water containing five drops of wood alcohol.

Hollyhock. Burn the stem ends as soon as cut. Soak in deep water over night.

Hyacinths. Plunge stem tips into boiling water then into cold water.

Heliotrope. Burn or char stem tips over flame, then place in pint of cold water, with 5 drops of wood alcohol.

Hydrangea. Same as for Calla lilies.

Iris. Cut and plunge immediately into cold water.

Kerria. Place in 1 pint of water containing 10 drops wood alcohol. (Double variety in plain cold water.)

Larkspur. Place in a solution of $\frac{1}{2}$ teaspoonful wood alcohol to 2 quarts of cold water.

Lilacs. Crush stems up 2 or 3 inches. Pick off all foliage excepting the leaf nearest the flower head.

Lupine. See recommended treatment for Lilacs.

Marguerites. Soak for 1 to 2 hours in a solution of 1 teaspoonful of peppermint oil to 1 qt. of water.

Marigolds. Allow stems to stand 1 to 2 hrs. in 1 qt. water containing 1 teaspoonful oil of peppermint.

Pansies. Place stems in 1 pint of water containing 5 drops of wood alcohol.

Peonies. Crush stem ends up 3 to 4 inches and place in two quarts of water containing 2 teaspoonfuls of sugar.

Petunias. Place in 2 quarts of water containing 2 tablespoons table salt.

Poppies. Char stem tips two to three inches over a hot flame and plunge into cold water.

Ranunculus. Add vinegar to the water, at the rate of $\frac{1}{2}$ cup vinegar to 2 cups water.

Roses. Slit the stem up 2 inches and place in two quarts of water containing 5 drops of wood alcohol.

Sweet peas. Plunge stems into boiling water then into cold water.

Snapdragons. Place stems, stripped of lower leaves, in two quarts water containing 3 tablespoons of baking soda.

Tulips. Place stem ends in boiling hot water for 1 minute.

Violets. Tie in bunches and submerge in water; then shake off all water.

Water lilies. Inject wood alcohol into the stems with a pump and keep in cold water for two hours.

Zinnia. Stripped of lower leaves, place in 2 quarts of water containing 2 tablespoonfuls of rock salt.

With those who want
the finest
WISS GARDEN TOOLS

are First Choice



GARDEN LOVERS all over the world have come to recognize the superiority of garden cutting tools bearing the brand name *Wiss* . . . a name backed by a century of experience as the world's largest manufacturers of fine shears and scissors. Constant adherence to quality standards accounts for the high efficiency and long useful life of Wiss Garden Tools. Here are some of the specific reasons why Wiss Garden Tools are preferred by amateur and professional alike:

Hot Drop-Forging creates a steel structure of durability and lasting keenness unequalled by any other method of fabrication.

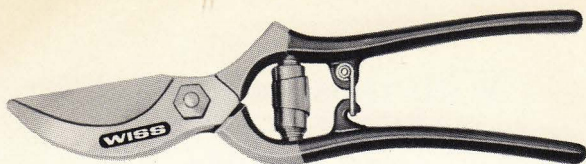
Hardening and Tempering accomplished by very accurate heating, develop the forgings to their maximum capacities.

Grinding is done by craftsmen, some with an experience of 50 years in the Wiss factory. Their efforts contribute a fineness and precision to Wiss tools which only skilled handwork can achieve.

Shear Blade Stress makes for clean, crisp cutting all the way from heel to point.

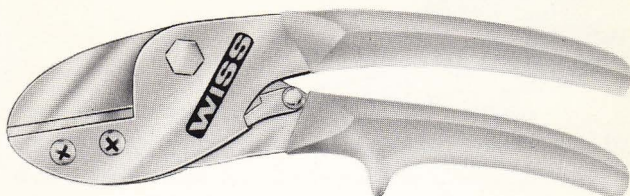
Design Excellence is achieved by experience and by continuous research and experiment. Wiss designs set a standard for balance, ruggedness, power and comfort in use.

Inspection of every operation along the line of production is continuously maintained to make sure that every Wiss Garden Tool will be perfect for its job.



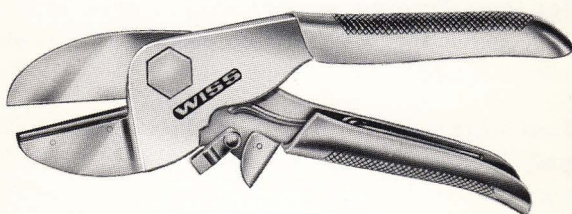
No. 607 Rose Pruning Shears

Thin blade shears with little effort, without bruising. Ideal for pruning roses. Used widely by commercial growers for light pruning. Length overall—7".



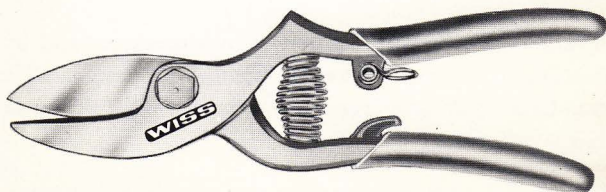
No. 708 Brass Anvil Pruner

Blades specially edged, hardened and tempered. Special molded vinyl non-slip grips. Two position latch for full or partial opening. All parts replaceable. Length overall—8". Also 7" version No. 707.



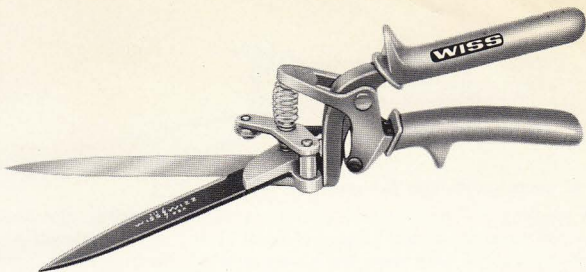
No. 908 Hy-Power Anvil Pruner

Tremendous cutting power. Nickel plated blades hand-edged, hardened and tempered. All parts replaceable. Length overall—8". Also in 7" size No. 907 without grips and No. 907-G with special "Comfort Grips."



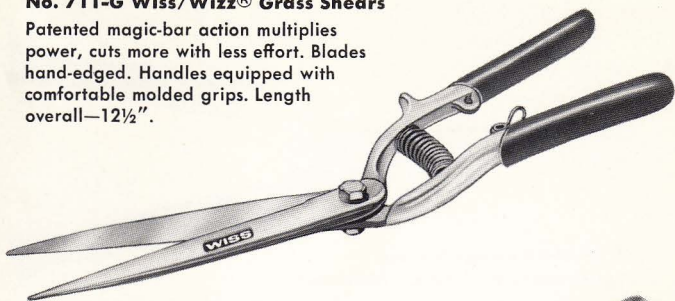
No. 808 "Draw-Cut" Pruning Shears

The professional favorite. Fitted with hand-protecting vinyl grips. Blades hand-edged, hardened and tempered for lasting keenness. Length overall—8".



No. 711-G Wiss/Wizz® Grass Shears

Patented magic-bar action multiplies power, cuts more with less effort. Blades hand-edged. Handles equipped with comfortable molded grips. Length overall—12½".



No. 5600 "Professional Grass Shears"

Specially hardened blades, narrow for extra close trimming, ground and edged to the keenness of tailors' shears to cut the toughest grass with ease. The handles, offset to prevent knuckle scraping, are fitted with comfortable, attractive green vinyl grips. Length overall—12".



No. 701 "Grass Master" Grass Shears

Easiest-cutting shears made. Up-and-down action handles. New spring design reduces effort required to one-half that needed with other shears. Easily operated closing latch. Beautiful vinyl handles provide smooth, soft-feeling grips. Length overall—12".



GT 100 Lawn, Hedge and Shrubbery Kit

All-purpose three-in-one kit. Contains fine quality WISS Hedge Shears, Grass Shears, Pruning Shears, and Gardening Gloves plus a copy of the 48 page booklet "How to Prune" — packed with helpful information. Attractively boxed . . . an excellent year-round gift idea.



"A" Pattern Hedge Shears

A pleasing well balanced design with super cutting power. Hot drop-forged tapered concave blades of finest cutlery steel, hardened and tempered. One knife edge blade, one serrated. New parallel handles of clear maple with wax finish.

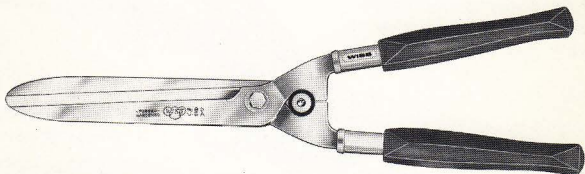
No.	Blade Length
8A	8"
9A	9"



"E" Pattern Hedge Shears English Style With Shock Absorber

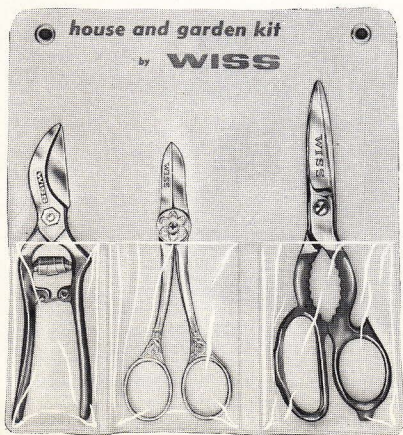
These are the finest WISS hedge shears, the choice of professional gardeners. Fitted with new patented shock absorber that takes the jolt out of hedge cutting, reduces arm fatigue. Special notch and cutter for heavy branches. Polished maple handles. One blade serrated.

No.	Blade length
8½ E	8½"
9½ E	9½"



No. 8-D Tubular Steel Pattern

Handles fitted with exclusive "Griprite" molded grips for maximum comfort. Special neoprene shock absorber. Blades hot drop-forged, hardened, hand-edged and honed. One blade notched and serrated. Length of blade 8".



House & Garden Kit

Three shears for busy home-owners always accessible in a handy fabric holder with transparent plastic pockets. Contents: 607 Pruning Shears (See page 44); FH 4 Flower Shears; KSR Kitchen Shears for preparing fruits, salads, fish, meats, opening bottles, etc.

WISS

