

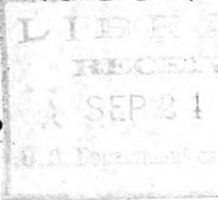
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Catalogue of 1893 *Lidley*

NEW WESTERN CATALOGUE

—OF—



• FRUITS, •

—AND—

SHADE AND ORNAMENTAL TREES AND EVERGREENS

PROPAGATED AND GROWN AT

Springfield Nurseries,

Springfield Nursery and Fruit Farm Association,

(Successors to Reynolds & Tippin,)

PROPRIETORS,

SPRINGFIELD, MISSOURI.

BRANCH NURSERY AT REPUBLIC, MO.

TREES FOR COMMERCIAL ORCHARDS A SPECIALTY.

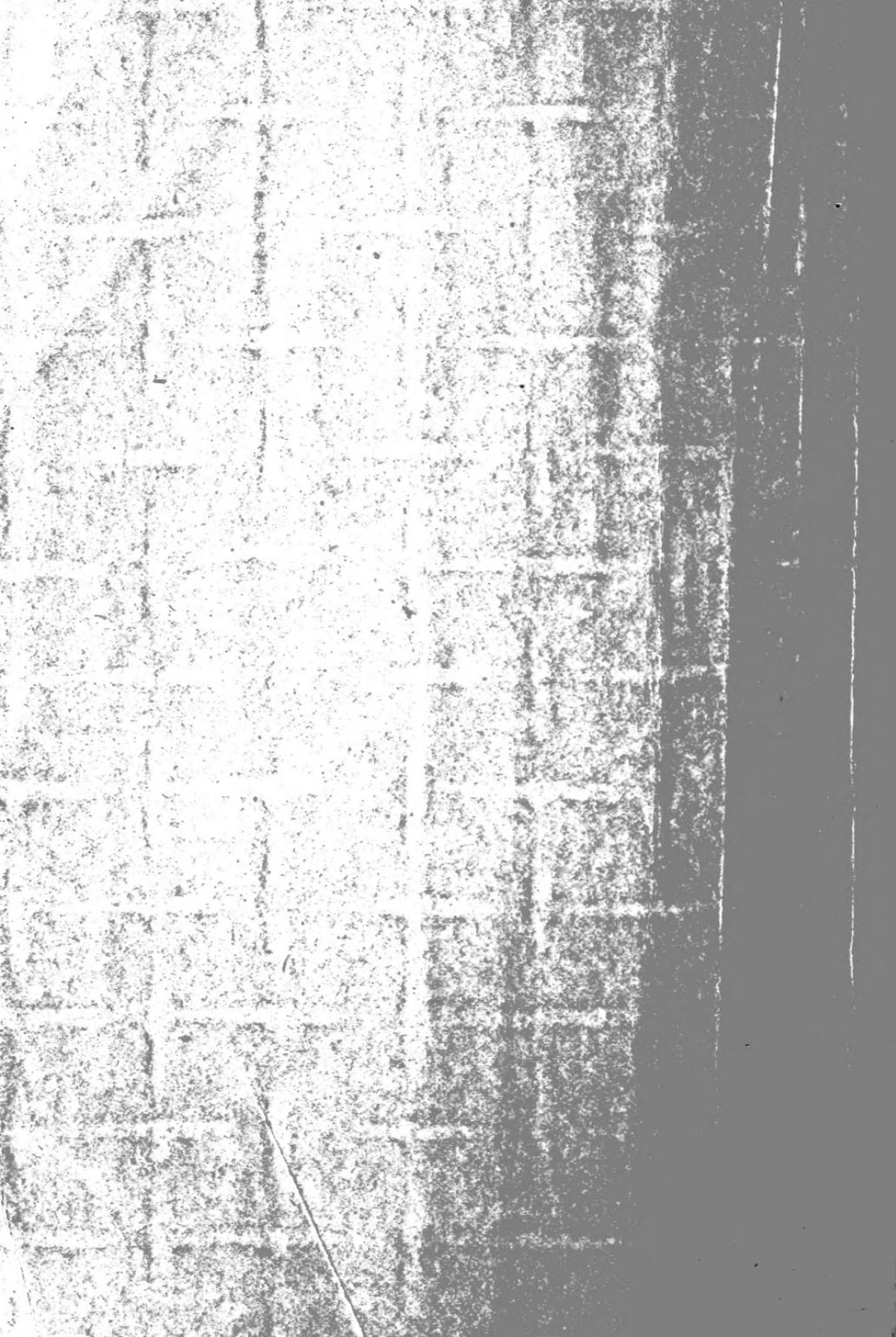
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Dixon Bros. Printers, 233 Commercial Street, Station A, Springfield, Mo.



A Word on Whole Root Trees.

As there are some Nurseries in the country using the above hobby as an inducement for the people to pay an extra price for their trees, and to believe they will have tap roots, live longer, etc., we feel that this Catalogue would be lacking were we not to say something to our friends and patrons on this subject.

First. All trees such as Peach, Plum, Pear, Cherry, Apricot, Quince, etc., and such trees as are propagated by budding, are grown on whole roots by all nurserymen; the apple being propagated by grafting. The roots for this purpose are grown from apple seed, which grow from 12 to 15 inches long in one year, or of sufficient length to make three grafts. Some nurserymen take the crown graft, which is from the first cut or piece of root next to top of seedling. These they plant to themselves and call whole root trees, while nearly all nurserymen plant their grafts all together. Merely a distinction without a difference.

Second. The nature of the growth of trees cannot be changed when grown upon its own roots by propagation. The upright growing trees will send down tap or deep roots, while the spreading tree grows its roots nearer the surface and spreading like the top.

Third. The whole root theory for the propagation of the apple as is advocated by some is impracticable in every sense. You will see this point when you remember that the seedling grows 12 to 15 inches in the soil the first year, and if the argument holds good as set forth by those using the whole root racket, which is to use a whole root to get a tap root—the object of the tap root is that it may grow down. Now let us see, whole root grafts set 15 inches deep, grow 2 years before the tree is 2 years old. Remember, whole root to get tap root—tap root to grow down, and if it does not continue to grow down the hobby is lost. So if theory is good it would be reasonable to suppose that in growing 2 years it would reach a depth of at least $2\frac{1}{2}$ feet, having 15 inches to start on. But it would not do so is tried, for the nature of the tree governs its growth both above and below the ground. So when you purchase trees from any Nursery and get a first-class tree above the ground, you get first-class roots if properly dug, it matters not how it was started. We call your attention to what some of the leading horticulturists of the country have to say on this subject.

Chas. A. Greene, of Rochester, N. Y., says in *Green's Fruit Grower*: We are asked by correspondents if there is anything in the whole root ques-

tion. Our reply is, there is nothing in it. Does the reader understand what is meant by whole root? It simply refers to the stock on which the cion is grafted to form a tree. The question is: Is it best to have a piece of a root or a whole root to graft upon? It is merely a question of propagation. The orchardist, who has no knowledge of nursery propagation, is hardly competent to pass on this question; therefore, he is easily confused and misled. Men in many kinds of trade desire to make the public believe that their particular stock of goods is the best stock for everybody to buy. Certain shrewd nurserymen have endeavored to persuade the public that their trees are the best and most durable, by publishing the claim that they are grafted on whole roots.

It is difficult sometimes to remove prejudices that exist in the minds of the people. It is often difficult to explain very simple things to those who have no practical knowledge in relation to the subject in hand. The facts are as follows: Cions of apple trees will not take root in the ground, like cuttings of the currant and grape. In order to assist the apple cion to take root, the cion is grafted upon an apple root or a piece of an apple root. So far as the life of the tree is concerned, or its health or productiveness, it matters not whether a piece or a whole root is used, for the piece of root attached to the cion is simply a temporary affair. This piece of root simply sustains the cion until it can establish a root of its own.

The fact is proved by the following circumstances: On digging a dozen varieties of apple trees, all grafted on pieces of root three years previously, we find that each variety has roots peculiar to, and characteristic of, that particular variety, and that each variety of a dozen kinds has an entirely different character of root. Thus we shall find that the Fameuse apple has three long prongs, without fibers, each root resembling a tap root, the tree being very hard to dig; whereas, the Red Astrachan, grafted in precisely the same way, growing along side the Fameuse, has fibrous roots and numerous main roots growing near the surface, enabling the tree to be very easily dug, and more satisfactory to the purchaser, and so on with other varieties, each differing from the other.

Notwithstanding this explanation of the piece root business, we assert that very few trees at the present time are grafted upon piece roots. Not because piece roots are not equally as good for the orchardist who plants the trees, but piece roots are not used, for the reason that trees can be more cheaply produced by budding upon stocks, which of course have whole roots. All cherries, peaches, plums, pears, apricots, quinces, in fact, everything but apple trees, are propagated by all nurserymen on whole roots. Except in very rare instances, no kinds of fruit are propagated on piece roots, except the apple, and it is our opinion that nine-tenths of the apple trees grown in Eastern states, are budded on whole roots. Not because they are better grown on whole roots, as we have said before, but because they can be more cheaply produced in that manner.

Perhaps the reader can see from what we have said, that any nurseryman who pretends to give better satisfaction to his patrons on account of making a specialty of whole roots, has very little to sustain his position. We have in mind nurseries that are making great pretenses in regard to the whole root business, publishing illustrations which tend to mislead. We should not attempt to write on this subject were it not for the fact that the public is so easily prejudiced in regard to such matters as this. For many years nursery agents have been proclaiming that the budded trees that they sell are the only safe trees to plant. These and similar schemes are simply the manouvers of tricksters who desire thus to impose upon the purchaser, inducing him to pay a higher price for what is claimed to be superior, but which is not.

The whole matter may be summed up as follows: Buy your trees of a firm which you have reason to believe is honorable and desires to give its patrons the best possible service for the least money.

L. A. Goodman, Secretary of the Missouri State Horticultural Society, in his annual report, for 1889, says:

ROOT GRAFTS AND WHOLE ROOTS. There is a deal of humbug about this cry of whole roots, and some of the traveling tree-peddlers have been using it as a means to rope in many well-read and intelligent people. This I state on Prof. Budd's authority. A Duchess or any other absolutely hardy variety, he says, will make a good tree if grown from a cutting, and when grafted on a short piece of root it practically is a cutting, as the piece of root only starts it, and roots are always thrown out from the cion. Fully ninety per cent. of our three year old apple, pear, cherry and plum trees are on their own roots if they have been grafted with a long cion on a short root and set deeply. Yet the crown graft is the best, and nurserymen could afford to make only one tree from one seedling. But the whole root idea is nonsense, as it would have to be set with a crowbar if put down deep enough to cause it to emit roots from the cion, as all our trees should do.

Maj. Holsinger says: On the subject of whole roots, I believe the trees know what they want as well as we do, and a piece of root one inch long is as good as a whole root. I believe the trees know their business, and will grow just as well as if it had a root two miles long. Small potatoes are just as good as large ones; so with our orchards. Any small trees are just as good as large ones.

Chas. Patterson says: Too much swindling has been going on about this whole root business. I believe it is a means of fooling our people.

C. H. Fink, Lamar, Mo., says: I believe that it is not possible to use whole roots, and it is only a means of some to advertise their whole grafted roots.



ILLUSTRATED DESCRIPTIVE

CATALOGUE

—OF—

Springfield Nurseries;

Fruit and Ornamental Trees,

GRAPE VINES,

Small Fruits, Shrubs, Plants, Roses, Etc.

1893.

DIXON BROTHERS, PRINTERS,
SPRINGFIELD, MO.

NOTICE TO CUSTOMERS.

1. Orders should be sent in as early as possible, that there may be plenty of time for shipping long distances when necessary.

2. Buyers ordering by letter should write out the order plainly, *on a separate list*, and not in the body of the letter. It will prevent mistakes in the hurry of the packing season.

3. Give plain and explicit shipping directions. When none are given, we forward according to our best judgment; but in no case do we assume any responsibility, after the delivery of stock in good condition to the forwarders.

4. All orders from unknown correspondents must be accompanied by the cash, or satisfactory references.

5. If the varieties of fruit ordered cannot be supplied, others equally as good, and ripening about the same season, will be substituted, unless ordered to the contrary.

6. We recommend that purchasers leave the selection of varieties with us, as far as possible, merely stating the proportion of summer, fall and winter fruit wanted, as our experience enables us to select such sorts as are adapted to the locality.

7. Immediate notice should be given to us of any error in filling out an order, so that we may at once rectify the mistake, or give a satisfactory explanation.

 As our nursery stock is particularly adapted to the Western climate, grown here, and under our own supervision, we hazard nothing in saying that it will prove greatly to the advantage of fruit growers and planters to plant our well-tested and carefully-grown fruit, and other trees, in preference to the imported stock offered so largely by dealers. Our motto is: "Western Stock for Western Planters." Any information on this subject will be cheerfully given. Correspondence solicited. Remember we are able to compete in prices with any one, and will sell at lowest rates.

INTRODUCTORY.

WE take pleasure in presenting a new edition of our Descriptive Catalogue. It has been carefully revised and corrected. And while we carry many varieties in stock that we have not presented in this list, we have endeavored to give a correct description of the varieties best adapted to this locality for general planting, and especially for commercial orchards. By studying and closely observing the different varieties of fruits that have been fruited in this, the Ozark Range, we are enabled to select out of a multitude of kinds, those varieties which are the most profitable to plant. In presenting this Catalogue to our customers, and the fruit growers of this section, we have only given the description of the varieties we can recommend.

We shall always aim to include in our assortment all such varieties of Fruit Trees as are known to be of value for family use or for market.

We give our personal attention to the taking up and packing of our stock, so that persons at a distance, ordering trees, can rely upon obtaining a good selection.

We hope, by a system of fair and liberal dealing, and strict attention to our business, to continue to merit and receive a share of the patronage of the fruit-loving and tree-buying public.

It is a deplorable fact that the young men of our rural districts, the farmers' sons, have become dissatisfied with the monotony and routine of ordinary farm life. They are restless and uneasy in their present situations, and are looking with longing eyes upon the imaginary attractions and excitements of our great over-crowded cities. They are strongly tempted, by wonderful stories of wealth attained without labor, to throw themselves into the tide of speculation which threatens to overrun the whole land. We suggest a remedy for this state of things, and one which we believe will commend itself to all thoughtful men. Let the farmer say to his sons, "Let us give to our employment more life and variety. Take a portion of the farm, as much as you like, plant an orchard of fruit trees, a vineyard, and a plantation of currants, berries, etc., for market. Ride about the country, visit and consult with the nursery-men and fruit-growers, as to the best varieties to plant, how to cultivate and gather the fruit, the best methods of packing, shipping, marketing, etc., for you will find that they have no secrets, and will be glad to give you any information in their power."

To the ladies, also, we would say, here is an inviting field of labor for you, and we are glad to know that many are already awakening to this fact. Foreigners tell us that our women are too little in the open air. The study and practice of Horticulture might become a source, not only of profit, but of health and constant enjoyment in the hands of any lady of refinement and culture.

We would not tempt the uninitiated with the promise of a large fortune in a few years, and with no labor or trouble; nor do we believe that for the development of all that is noble and good in humanity, this is best. But we do say that the business of fruit growing, conducted with energy, perseverance and intelligence, will bring an ample and sure reward.

No person is willing to engage in extensive planting without being fully satisfied as to the success he will be likely to obtain. In order to present reliable information on this point, we shall, in the different sections of this catalogue, cite some instances of profitable culture that have come to our knowledge.

Good cultivation, by which we mean keeping the ground at all times mellow and free from weeds, together with thorough drainage—either natural or artificial, is absolutely necessary, in our opinion, to success. This, with judicious pruning, and proper selection of varieties, suitable for the locality, in nearly all portions of the United States, produces gratifying results.

HINTS ON PLANTING.

Select thrifty young trees, rather than old or very large ones; the former bear transplanting better, can be more easily trained to any desired shape, and eventually become more valuable.

THE SOIL

for Fruit Trees must in all cases be dry, either naturally or made so by draining. A rich loam is always most desirable, but by judicious treatment, both very light and very heavy soils are available.

PREPARATION FOR PLANTING.

Pulverize 12 or 18 inches by repeated plowing and sub-soiling; but when grass land must be used, remove the turf from a circle 4 or 5 feet in diameter; keep the space mellow and free from weeds. Make the hole larger than is necessary to admit all the roots in their natural position, and throw out the surface and sub-soil in separate piles.

When your trees arrive, prune off broken or bruised roots, and cut back the last growth of top to 4 or 5 buds, except in fall planting, when the top pruning may be deferred until the spring following. If not ready to plant at once, "heel in," by opening a trench deep enough to admit all the roots, and set the trees therein as close together as they can stand, being careful to tramp the dirt close about the roots. Take up again as wanted. If ready to plant,

keep the roots shaded or wet. Some planters "puddle" their trees by dipping the roots in a paste of mud and water.

PLANTING.

Round up the bottom of the hole with surface soil, so that the tree will stand no deeper than it did in the nursery, except the Dwarf Pear, which must be deep enough to cover the Quince stock on which it is budded, 2 or 3 inches. Work the soil around and under the roots with the hand, and when well covered tramp down hard (if not too moist.) Set the tree as firm as a post, but leave the surface filling (of the poorer soil) light and loose. Trees thus set will need no staking unless quite tall. Never use manure in contact with the roots.

When planted in the fall, keep earth around the trunk a foot high or more, to remain during the first winter only, as a protection against frost and mice.

MULCHING

or covering the ground with coarse manure, straw, marsh hay, or other vegetable refuse, during the first summer, will effectually prevent injury from drouth, and is a benefit at all times.

INJURED TREES.

If trees are received in a frozen state, place the package unopened in a cellar, away from frost and heat, until thawed out, and then unpack. If dried from long exposure, bury entirely in the ground, or place in water from 12 to 24 hours.

Minute details of the management of Fruit Trees, etc., will be found in standard works on Horticulture. Some general hints are given under the various headings of this catalogue.

HOW TO WINTER TREES PROCURED IN THE FALL.

The practice of procuring supplies of trees in the fall is becoming more and more general as each season demonstrates its wisdom. It is a more favorable time than spring, because of the colder weather, and the lighter pressure of business with nurserymen, the freighting companies and the planter. Even when fall planting is not desirable by reason of the severity of the climate, the stock may be *procured* in the fall, and thus be on hand for the opportune moment in the spring. To insure success you have only to get the trees before freezing weather, and bury them in the following manner: Choose a dry spot where no water will stand during the winter, and with no grass near it to invite mice. Dig a trench, throwing out enough dirt to admit one layer of roots below the surface, and place the trees in it, inclined to an angle of 45 degrees or more. Widen the trench, throwing the soil among the roots in position; place another layer in the trench, reclining the tops on the others, and so on until all are in the trench; then finish by throwing up more soil until the tops of the trees are nearly or quite covered. It is also well to bank up the earth around the sides to insure more thorough protection. Care should be taken to fill solid all the interstices among the roots. In the spring the roots will be found

to have formed the granulations necessary to the production of new spongioses, and when planted at the proper time will start to immediate growth.

If the trees are frozen when received, they should be buried immediately in the earth, tops and all, and allowed to thaw in this condition.

PLANT YOUNG TREES.

We cannot too strongly recommend to our customers the procuring of young trees, especially for orchard planting, instead of selecting the largest that can be had, to secure a more immediate effect. Young trees cost less at the nursery, also in freight, handling, and planting; they can be taken up with more perfect roots, and will become sooner established in a new location. They can also be more readily trained to any desired shape. The largest and most successful planters invariably select young thrifty trees as the surest in the end to give thorough satisfaction.

For small grounds, or street planting, when it is necessary to make a show as soon as possible, large trees are often desirable, and when handled with care should do well, but with the general planter the average of loss will be much less, and both time and money will be saved if young trees are selected to commence with.

DISTANCES FOR PLANTING.

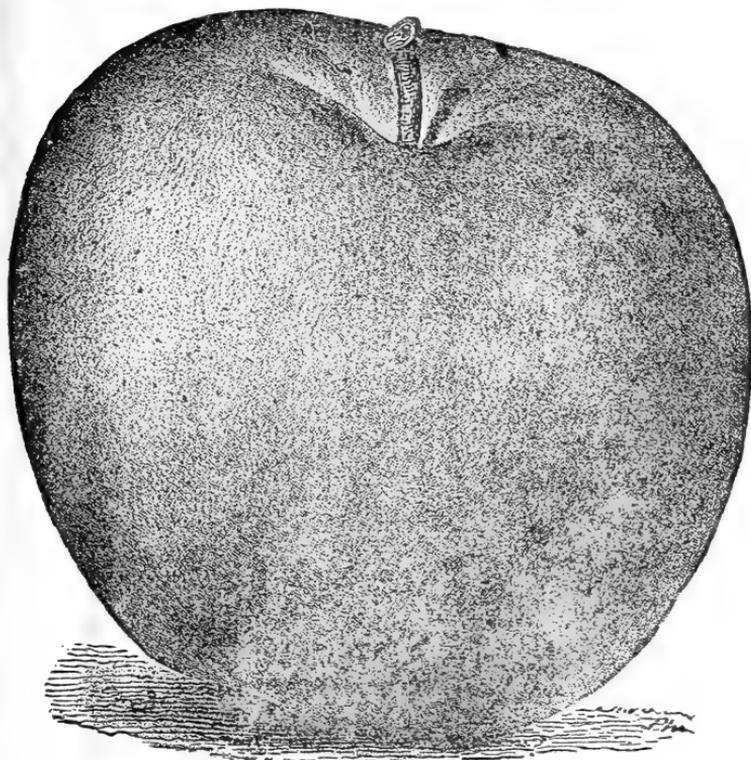
Standard Apples,	30 feet apart each way.
Standard Pears and strong growing Cherries,	20 " " " "
Duke and Morello Cherries,	18 " " " "
Standard Plums, Apricots, Peaches, Nectarines,	16 to 18 " " " "
Dwarf Pears,	8 to 10 " " " "
Dwarf Apples,	6 to 8 " " " "
Grapes,	rows 6 to 10 feet apart; 7 to 10 feet in rows.
Currants and Gooseberries,	3 to 4 " apart.
Raspberries and Blackberries,	3 to 4 by 5 to 7 apart.
Strawberries, for field culture,	1 to 1½ by 4 to 5 "
Strawberries, for garden culture,	1 to 2 feet apart.

NUMBER OF TREES ON AN ACRE.

30 feet apart each way,	50	10 feet apart each way,	435
25 " " " "	70	8 " " " "	680
20 " " " "	110	6 " " " "	1210
18 " " " "	135	5 " " " "	1745
15 " " " "	205	4 " " " "	2725
12 " " " "	300	3 " " " "	4840

RULE.—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill; which, divided into the number of feet in an acre (43,500), will give the number of plants or trees to the acre.

FRUIT DEPARTMENT.



PAYNE'S KEEPER.

APPLES.

The first fruit, both in importance and general culture, is the apple. Its period, unlike that of other fruits, extends nearly or quite through the year. By planting judicious selections of summer, autumn and winter sorts, a constant succession can be easily obtained of this indispensable fruit for family use.

There is no farm crop which, on the average, will produce one-fourth as much income per acre as will a good apple orchard. As it takes from 6 to 8

years for an orchard to come into bearing, some people hesitate to plant, regarding the time and expenses as in a great measure lost. In reply to this we would quote the remarks made by O. C. Chapin, of East Bloomfield, N. Y., to J. J. Thomas. He said that he considered the yearly growth of each apple tree planted in his immense orchard of over one hundred and fifty acres, to be worth fully one dollar before they commenced bearing. He has had experience of nearly half a century, and he says that he considers this a low estimate. At fifty trees per acre, this would make a yearly increase of value of fifty dollars per acre, which no doubt is quite within the mark.

An acre of good orchard is worth, in nearly all parts of the country, from five hundred to one thousand dollars, and is the best kind of an investment at those prices, one or two years' crops frequently paying the whole amount. The price paid for the fruit is steadily on the increase, and there is no indication that it will ever be as low in the future as in the past. The wonderful growth of our cities and towns, in wealth and population, will always give a market at prices highly satisfactory to the producer.

If apples are planted at the rate of fifty trees per acre, rows of peach trees can be planted between the apples, which, growing more quickly than the apple trees, soon protect them from the winds, and thus are a great benefit to them. After eight or ten years of productiveness, as the space is needed for apples, the peach trees may be removed, leaving the orchard better for the protection, and at the same time having yielded the planter a large return for his trouble.

RUSSIAN APPLES.

The few Russian apples which are of great value, are becoming very old, and have been in our leading nurseries for half a century. They are the Yellow Transparent, Red Astrachan, Alexander, Tetofsky, and Duchess of Oldenburg, while many so-called "Russian" are natives of Germany or the Northwestern States. The Red Bietigheimer is from Wurtemberg; the Pewaukee, Wealthy, and Walbridge from Minnesota and Northern Iowa, and all the more valuable for it, as they are suited to the climate. Remember! "Western Trees for Western Planters!"

SUMMER.

✓ AMERICAN SUMMER PEARMAIN. Medium, oblong; striped and dotted with red; tender, juicy and rich; a slow grower; good bearer. August.

✓ ASTRACHAN RED. Large, roundish, nearly covered with deep crimson, overspread with a thick bloom; juicy, rich, acid, beautiful. The tree is a vigorous grower, with large foliage, and a good bearer. July.

✓ BENONI. Medium size, nearly round; deep red, with a rich flavor. Tree vigorous and productive. July.

✓ CAROLINA RED JUNE. Medium size, oval; deep red, flesh white, tender, sub-acid. Tree erect, good grower, productive. Early bearer, good at the West. July.

✓ **DUCHESS OF OLDENBURG.** A large, beautiful Russian apple; roundish, streaked red and yellow; tender, juicy, and pleasant. A kitchen apple of best quality, and esteemed by many for dessert. Tree a vigorous, fine grower, and a young and abundant bearer. August. Succeeds well in the Northwest where most varieties fail.

✓ **EARLY HARVEST, (Yellow Harvest.)** Medium to large, pale yellow; fine flavor. Tree a moderate, erect grower, and a good bearer. A beautiful and excellent variety for both orchard and garden. Middle to end of July.

✓ **KESWICK CODLIN.** Large, conical; tender, juicy, acid, excellent for cooking. Tree erect, vigorous, productive, and early in bearing. July to October.

✓ **PRIMATE.** Above medium, straw color, tinged with blush; tender, fine-grained, juicy and sub-acid; a vigorous grower and abundant bearer. Ripens July and August. One of the very best apples grown.

✓ **SWEET BOUGH.** Large, pale greenish-yellow; tender and sweet. Moderate grower and good bearer. Last of July.

✓ **SWEET JUNE, OR HIGH TOP SWEET.** An excellent early sweet apple, ripening gradually from 10th of July to middle of August. Pale greenish-yellow, medium size, round; tree very productive; fine for table and cooking; perfectly tender. July.

✓ **SUMMER QUEEN.** Medium to large, roundish, surface yellow, blotched and streaked with red; flesh yellow and tender, with an acid, aromatic flavor. July and August.

✓ **SOPS OF WINE.** Medium size, oblong, red; flesh white, often stained; mild and pleasant; productive. July and August.

✓ **TETOFKY.** A Russian apple which has proved profitable for market growing. The tree is an upright grower, forming an open head; comes into bearing extremely early, usually the second year after transplanting, and bears every year. Hardy as a Crab. Fruit good size, nearly round, yellow, beautifully striped with red; flesh white, juicy, pleasant, acid, aromatic. July and August. New.

AUTUMN.

✓ **AUTUMN STRAWBERRY.** Medium, streaked; tender, juicy, fine; vigorous and productive; very desirable. August and September.

✓ **BAILEY'S SWEET.** Large, deep red, tender, rich, sweet. Good bearer, but the tree is apt to be tender. October to November.

✓ **DYER, (Pomme Royale.)** Rather large; pale yellow, with a brownish blush next the sun; tender, juicy, and fine flavor. August and September.

✓ **FALL PIPPIN.** Very large, yellow, tender, juicy and rich. Tree vigorous, fine in all localities. September.

✓ **FAMEUSE, (Snow Apple.)** Medium size, roundish, oblate; whitish ground, striped with deep red; flesh very white, juicy and pleasant. October and November.

✓ **FALL QUEEN, (Buckingham.)** Large to very large, oblate; greenish yellow, striped with dull red. Tree productive and hardy; fruit very tender, juicy and excellent. October to January.

HASS, (Gros Pommier.) Medium to large, slightly conical and somewhat ribbed; pale greenish-yellow, shaded and striped with red; flesh fine, white, sometimes stained, tender, juicy, sub-acid, good. Tree vigorous and hardy, upright grower, with well-formed head; bears early and abundantly. Originated near St. Louis, Mo., and is very popular in the West and Northwest. September and November.

JERSEY SWEET. Medium; striped red and green; very sweet, rich and pleasant. Good grower and bearer. August and September.

LOWELL, (Orange, Tallow or Greasy Pippin.) Large, oblong; skin oily, pale yellow, brisk, juicy, rather acid flavor. Good for table and cooking. August.

MAIDEN'S BLUSH. Medium size, flat, quite smooth and fair; pale yellow, with beautiful red cheek; tender, sprightly, pleasant acid flavor. Vigorous grower and good bearer. August and September.

RAMBO. Medium, yellowish, streaked with dull red and somewhat dotted; mild, tender and good. Fine grower, productive. September to November.

WINTER.

CLAYTON. Large, conical; greenish yellow, covered, striped and splashed with dull red. Flesh yellow, breaking, sub-acid. Productive and hardy. December to February.

BEN DAVIS, (New York Pippin, Kentucky Streak, Etc.) A large, handsome, striped apple of good quality. Tree very hardy, vigorous and productive; late keeper; highly esteemed in the West and Southwest.

ENGLISH RUSSET. Medium size, ovate and conical; greenish yellow, covered with russet; crisp, sub-acid; a strong upright grower, and a certain and great bearer. November to March.

FALLAWATER, (Fornwalder, Tulpehocken.) Very large, globular; yellowish green, dull red cheek; juicy, crisp, pleasant, sub-acid flavor. Tree a strong grower, very productive even while young. November to January.

FULLERTON FAVORITE. Tree a strong upright grower. Fruit nearly as large as Ben Davis, dark red, covered with white specks; sub-acid to sweet, very rich. A good keeper.

GRIMES' GOLDEN, (Grimes' Golden Pippin.) An apple of the highest quality, equal to the best Newtown; medium to large size, yellow. Tree hardy, vigorous, productive; grown in Southern Ohio. November and December.

JONATHAN. Fruit medium, roundish; skin yellow, nearly covered with dark or lively red; fine grained; very tender and finely flavored. Tree slender and spreading, with light colored shoots. One of the best. November to January.

HUNTSMAN'S FAVORITE. Originated in Johnson county, Missouri. Very large, golden yellow, with bright red cheek; nearly sweet, fine flavor, very aromatic; one of the best and highest selling market apples. Tree very healthy and productive. November to April.

INGRAM. Originated in Greene county, Missouri. A seedling of the Janet; greenish yellow, striped with red; medium size; full and regular bearer; sub-acid. Keeps till May.

✓ **LIMBER TWIG.** Medium to large; yellow, striped with crimson; sub-acid; good keeper. December to April.

✓ **LANSINGBURGH.** Medium; greenish yellow, with red cheek; good flavor, but flesh rather dry and hard; very long keeper, and a good shipping apple late in the season, which is its chief recommendation. Tree a good grower and very productive. February to May.

✓ **MISSOURI PIPPIN.** Large, oblong, bright red, with numerous gray dots; very handsome and of fair quality; an early and very abundant bearer, and a very profitable orchard fruit. December to April.

✓ **NEWTOWN PIPPIN.** One of the very best apples as to quality. Tree a light grower while young; very juicy, crisp, and highly delicious flavor; requires manure for the best fruit; fine keeper. December to May.

✓ **NORTHERN SPY.** Large roundish, slightly conical, ribbed; striped, with the sunny side nearly covered with purplish red. Flesh white and tender, with a mild sub-acid, rich and delicious flavor. The tree is a strong, upright grower, and forms a very compact head; should be kept open by pruning, so as to admit the air and light freely. November to December.

✓ **PEWAUKEE.** A seedling from Duchess of Oldenburg. Fruit medium to large, obovate, waved; surface bright yellow, partially covered with dull red; striped and splashed, covered with a gray bloom and overspread with whitish dots; cavity small, basin shallow and slightly fluted; calyx rather large; stem variable in length, with a fleshy substance on one side from one-half to one inch long, core small; flesh yellowish white, breaking juicy; flavor sub-acid, rich, aromatic, spicy, something like the Jonathan; quality good to best. Tree strong grower, and very hardy. January to June. New.

✓ **PENNSYLVANIA RED STREAK, (Winter Wine.)** Large, oblate, greenish yellow, striped with lively red; flesh tender, sprightly sub-acid, very good. Tree hardy and productive. November to December.

✓ **RAWLE'S JANET.** Medium, roundish, ovate; greenish yellow, striped with red; crisp, rich and juicy. One of the best and longest keepers in the South and Southwest.

✓ **ROME BEAUTY.** Large, yellow, shaded with bright red; flesh yellowish, tender, juicy, sub-acid. Moderate grower. November to February.

✓ **ROBINSON PIPPIN.** Originated in Greene county, Missouri. Has been tested for many years, and is proving to be one of the best commercial sorts. Color bright yellow; medium to large; rich, sub-acid flavor. A good keeper. X

✓ **ROMAN STEM.** Tree a strong upright grower. Fruit yellow, with bluish cheek, good size and flavor. Keeps till March.

✓ **RED WINTER SWEET.** An old sort well known, and should be in every family orchard.

✓ **SMALL ROMANITE, (Carthouse, Gilpin.)** An annual and great bearer, and a long keeper; bright red; medium; fair quality. January to May.

✓ **STARK.** Tree a very strong upright grower; large, roundish; greenish yellow, splashed and covered with light and dark red. Very good. December to April.

✓ **SEEK-NO-FURTHER, (Westfield.)** Medium to large; slightly russeted, with

dull red stripes; tender, rich, spicy and fine. Good grower and bearer. October to December.

SMITH'S CIDER. Medium, striped; flesh tender, juicy, sub-acid; very popular in Pennsylvania and Western States. December to February.

SPITZENBURG, ESOPUS. Medium to large, deep red; flesh yellow, crisp, sub-acid, highly flavored. Tree a light grower in the nursery, but bears and grows well transplanted in rich soil. November to February.

WHITE WINTER PEARMAN. Oblong, bright yellow, sometimes with brownish blush; sweet, highly flavored, and fine, good keeper; but the tree is rather unhealthy, and the fruit liable to scab. January to April.

WEALTHY. A native of Minnesota, where it has proved perfectly hardy, vigorous and productive. Fruit of medium size, red, streaked with white; quality good. December to February.

WHITE PIPPIN. Large, roundish; greenish yellow; good quality; a fine orchard tree, and very productive; an annual bearer of handsome and good fruit. December to March.

PRICE LIST.

	Each.	Per 100.	Per 1,000.
Apple Trees, 2 year old, 5 to 6 feet, general assortment,	10c.	\$9.00	\$60.00.
Apple Trees, 2 year old, 4 to 5 feet, general assortment;	10c.	8.00	50.00.
Apple Trees, 2 year old, 3 to 4 feet, general assortment,	8c.	6.00	40.00.
Apple Trees, 2 year old Whips, 3 to 5 feet, gen. assortment,	8c.	6.00	40.00.
Apple Trees, 1 year old, 2 1-2 to 3 feet, No. 1, gen. assortm't,	8c.	6.00	40.00.
Apple Trees, 1 year old, 2 to 2 1-2 feet, medium, gen. asst,	7c.	5.00	30.00.

NEW SORTS.===ALL TESTED.

BABBITT. The photo shows a specimen of this magnificent apple. The Babbitt stands on a record of over fifty years.

N. F. Murray, Vice President Missouri State Horticultural Society, says:

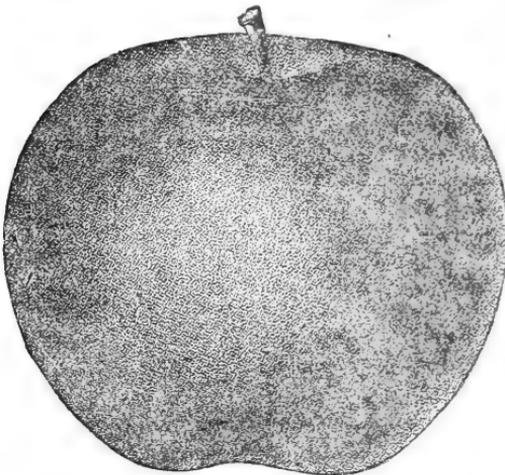
"Babbitt took the first premium of the Missouri State Horticultural Society as the best new apple for market, and has received the highest praise from all who have seen it. It has never taken second premium anywhere. I think it will stand in the West where Baldwin stands in the East, and largely supplant Ben Davis."

W. R. Laughlin: "Tree a very strong, large grower; wood hard and tough. Fruit, one-third larger than the Baldwin, brighter red; flesh, fine grained, juicy, crisp, rich, and of a peculiarly fine acid; use, baking, stewing, pies or jelly, for each and all of which it is simply the best; in cooking it literally melts. Ready to cook soon as grown but is so acid that few like to eat it uncooked until the latter part of its season, when it is a favorite eating apple. Season, October to April, but can be kept until May."

BABBITT, $\frac{1}{2}$ SIZE.

2 year old Trees, 15 cents each, \$12.50 per hundred.

1 year old Trees, 10 cents each, \$8.00 per hundred.



✓ **ARKANSAS BLACK.** From Benton county, Arkansas. Tree a strong grower; fruit large, very dark red color, good flavor. Has proven satisfactory in Arkansas, and on the Southern slope of Missouri; to the North it is inclined to scab.

2 year old Trees, 4 1-2 to 6 feet, No. 1, 15 cents each, \$10.00 per hundred.

1 year old Trees, 2 1-2 to 3 feet, No. 1, 10 cents each. \$8.00 per hundred.

✓ **COFFELT BEAUTY.** Also sent out from Northwestern Arkansas. This is one of the most promising new apples now claiming the attention of fruit growers. The tree is a strong, upright, spreading grower; very hardy, a regular bearer. Fruit, medium size, red, slightly striped, very firm, fine grained, mild, sub-acid, good. Has been kept until July in an ordinary cellar.

2 year old Trees, 15 cents each, \$12.00 per hundred.

1 year old Trees, 10 cents each, \$8.00 per hundred.

✓ **GANO, (Red Ben Davis.)** Yellow, nearly covered with dark red; very handsome; round, ovate, medium to large; flesh pale yellow, mild, sub-acid; quality, excellent; season with Ben Davis. Tree strong, upright grower, full and regular bearer.

2 year old Trees, 15 cents each, \$10.00 per hundred.

1 year old Trees, 10 cents each, \$8.00 per hundred.

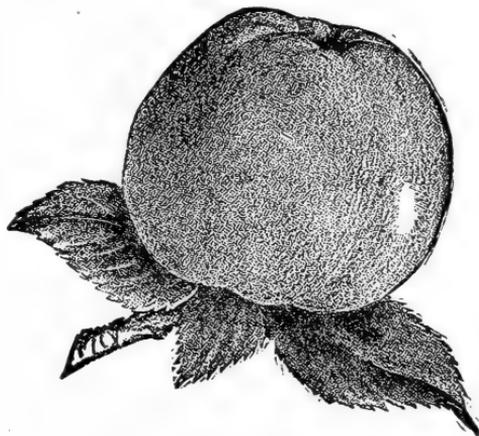
✓ **HOLMAN.** A new variety. Originated by Mr. Shockley, 3 miles east of Springfield, Missouri. For a selection in a family orchard this is one of the best. The late D. S. Holman, of Springfield, was awarded three State premiums by the Missouri Horticultural Society, on this variety, as the best eating apple, over everything else. Fruit medium size, striped with red. Will keep until February. Sub-acid, spicy, rich flavor of the best quality.

1 year old Trees, 10 cents each, \$8.00 per hundred.

✓ **LOY.** Awarded the first prize at the New Orleans Exposition, for the best new apple. Origin, Missouri. Named and recommended by the Missouri State Horticultural Society. The fruit is as large as the Ben Davis, resembling the Willow Twig in form and color. Core small, stem short, quality the very best, an extra long keeper. Tree a good grower, hardy, an early and annual bearer; a decided acquisition.

2 year old Trees, 15 cents each.

1 year old Trees, 10 cents each, \$8 per hundred.



YELLOW TRANSPARENT.

✓ **MAMMOTH BLACK TWIG.** This apple is from Arkansas. Very large in size; dark red in color. Good quality. Is proving a valuable acquisition to the list of commercial apples at its home, also in Southern Missouri.

2 year old Trees, 15 cents each, \$10.00 per hundred.

1 year old Trees, 10 cents each, \$7.00 per hundred.

✓ **MINKLER.** Tree a strong grower, and good bearer. Fruit medium to large;

not quite so red in color as Ben Davis; very fine quality. Keeps until March. The Minkler is taking its place in the commercial orchards.

2 year old Trees, 15 cents each, \$10.00 per hundred.

1 year old Trees, 10 cents each, \$7.00 per hundred.

PAYNE'S KEEPER. Originated in Dade county, Missouri, by Joseph G. Payne, from seed brought from North Carolina. The original tree has borne for thirty years in succession. Mr. Payne now has an orchard of 84 trees, eleven years from graft, and has borne six successive crops without fail. The tree as to growth, shape, hardiness, early and regular bearing equals the Ben Davis, if not excelling it. Fruit nearly same color as Ben Davis, medium to large in size; quality, sub-acid, good; very good in flavor. Can be kept to August and September with special care. Keeps to May and June with ordinary handling.

2 year old Trees, 15 cents each, \$12. per hundred.

1 year old Trees, 10 cents each, \$7. per hundred.

YELLOW TRANSPARENT. A new Russian variety imported by the Department of Agriculture; wherever tested proves to be decidedly the best early apple. Fruit, full medium size, clear, white skin, changing to a beautiful yellow, when fully ripe; of good quality, and, for an early variety, a good shipper. Ripens ten days before Early Harvest. On account of its earliness, size, beauty, quality, extraordinary hardiness, productiveness and early bearing, it is one of the most desirable sorts. We have fruited it on our grounds the past three years.

2 year old Trees, 15 cents each, \$12. per hundred.

1 year old Trees, 10 cents each, \$8. per hundred.

YORK IMPERIAL. Like the Babbitt, while not a new apple, yet its merit as a valuable commercial apple has been but little known until the last few years, when it came into bearing in this State, where it is proving very satisfactory to the planters. Fruit a little larger than Jonathan, not quite so bright red; a little oblong in shape, and of excellent flavor. Will keep with the Ben Davis; a valuable sort.

2 year old Trees, 15 cents each, \$10. per hundred.

1 year old Trees, 10 cents each, \$7. per hundred.

CRAB APPLES.

There are several points to which we wish to call particular attention, and on which we base our recommendation of these hardy fruits for general cultivation.

1st. They are adapted to almost all localities.

2d. They ought to be in every orchard for family use, and when planted largely they are as profitable for commercial orchards as the apple.

3d. They will come into bearing very early, often in the second year from planting, and bear every year.

4th. They are very productive, giving large crops of beautiful fruit.

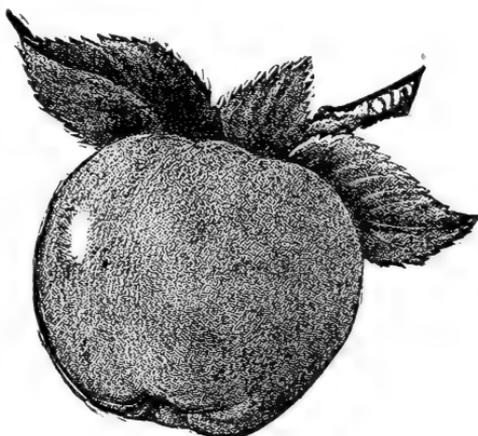
5th. They give larger returns than any other kind of apple, selling from \$10 to \$16 per barrel in market.

6th. They are unequalled for cider or vinegar, both of which command the highest market price.

7th. Some of them are pre-eminently dessert fruits, being of superior quality and strikingly handsome.

8th. They can be dried, cooked, canned or preserved with the skin on, saving a great amount of trouble.

9th. The size of the fruit varies from 1½ to 2½ inches in diameter, being large enough to quarter and core for drying, etc.



WHITE ARCTIC.

The following are the most valuable varieties:

✓ HEWES' VIRGINIA CRAB. Rather small, round; dull red and dotted with white; acid, somewhat astringent, esteemed for cider.

✓ HYSLOP. Almost as large as Early Strawberry Apple; deep crimson; very popular on account of its large size, beauty and hardness.

✓ LARGE RED SIBERIAN CRAB. About an inch in diameter, grown in clusters; yellow, lively scarlet cheek. Tree erect, vigorous, bears young and abundantly. August and September.

✓ MARTHA CRAB. A new variety which we have fruited here. Color, red, with stripes; large, with splendid flavor.

✓ TRANSCENDENT. All things considered, this is, perhaps, the most valuable variety of Crab Apple grown. Tree remarkably vigorous, growing to a good size, and immensely productive. Comes into bearing a little the second year from planting, bearing every year after, and produces good crops by the fourth year. Fruit very large, from one and one-half to two inches in diameter, being large enough to quarter and core for preserving and drying. Excellent for sauce and pies, both green and dried. The best of its class for cider, being juicy and crisp, and is also, by many, considered a good eating apple. Skin yellow, striped with red. August and September.

✓ WHITE ARCTIC. A new variety fruited in our nursery last year. Fruit large; color, bright yellow. A splendid sort.

✓ WHITNEY'S No. 20. Very large, handsome and fine. August.

✓ YELLOW SIBERIAN CRAB. Fine amber or golden yellow color.

2 year old Trees, 25 cents each, \$15.00 per hundred.

1 year old Trees, 15 cents each, \$10.00 per hundred.

PEARS.

While the melting, juicy texture, the refined flavor and the delicate aroma of the Pear give it a rank above all other fruits, except the grape, it is still an open question, discussed annually in the meetings of our horticultural societies and through the press, whether it can be grown with profit; and while all will agree that it will bring more money, is easier to handle, and less subject to have its bloom winter-killed than the apple, and much more so than the peach, yet the blight is the great bug-bear which keeps our people from planting this noble fruit. While we acknowledge that this is a serious drawback, yet there are many instances on record of successful orchards and small patches here and there, where pears have been grown with invariable success, and free from blight. The rules of our Eastern brethren, of high cultivation and stimulating manures, will evidently not hold good here, for what may benefit their trees, would kill ours, and many of our planters who thought that because they paid higher for their pear trees than for their apples and peaches they had to give them the richest place in their orchards, have found to their cost that the soil can easily be too rich for pears, have stimulated them into a late growth, and lost their trees.

As to blight, we do not say there are any varieties that are entirely blight-proof. The Kieffer, Seckel, Howell and Sheldon are among the hardiest sorts. The Duchess is also fairly hardy.

We do not recommend much culture for pear trees after the first year. Wood ashes make a good mulch. Clover is perhaps the best crop to grow in a pear orchard. Grow your trees, even the Standards, with low heads, branching out two feet from the ground. They will bear earlier, can be kept in shape easier and will shade the trunk and the ground, so that they are not so easily affected by extremes of drouth, and burning suns.

Form them into a pyramid by selecting the strongest central shoot as a leader, and pinch the strongest growing shoots several times during the summer, to check their growth and induce formation of fruit buds.

While we would prefer Standard Pear trees for orchard culture as a general thing, there are a few varieties which succeed better on the quince than on pear roots, and which are so good that we cannot do without them. Duchess D'Angouleme and Louis Bonne de Jersey are two of these, and no pear grower can afford to be without them. Tyson and Beurre d'Anjou are also among our best varieties, and so tardy coming into bearing on pear roots that our fast people cannot wait; they can be obtained much sooner if grown as dwarfs. For small gardens, dwarfs are also more desirable, as they take less room and come into bearing quicker. They should in all cases be branched within two feet of the ground.

Pears should in all cases be ripened in the house, not on the trees, as they will become finer in color, be much better in quality and are handled and

shipped with greater safety than when ripened on the tree. Pick them when they have attained their full size, and they begin to show that slight change of color indicative of ripening. The best sign of their being ripe enough is when the fruit is moved upward by the hand and the stem parts readily from the branch. Always leave the whole stem on the fruit in picking; a pear without the stem is as much disfigured as a man with his nose cut off. In this state, where the fruit is yet solid, it can be handled and barrelled with as much safety as apples, and will bear shipping to any distance, so that the dealer can receive it in the best condition, and it will ripen and color as fast as he wishes to sell it. But it will pay, and pay well, to select the best and most perfect, wrap them in paper separately, and thus prevent all bruising; there are instances on record where a single barrel, carefully selected and skillfully handled, has sold for \$60 to \$65. Winter dessert pears should be wrapped in paper, put in barrels or boxes, and placed in a dry, cool room, keeping them covered to prevent shriveling. About a week before they are to be used, they should be removed to a warmer atmosphere, kept at a temperature of 60 to 70 degrees. They will then become tender and melting and obtain a higher flavor than if ripened in a cold room.

There are thousands of rocky hillsides, where the soil is loose, dry and deep, but so intermixed with stones as to be unfit for cultivation, which could be converted into profitable pear orchards; and as the pear, where free from blight, is a much surer crop than even the apple, while the fruit commands four times the price of apples, can be shipped as easy and with even greater safety than the apple and always finds a ready sale, those who have such lands should give them a trial, and thus convert their barren hillsides into sources of profit and pleasure.

The letters "D" and "S" appended to the descriptions of varieties indicate favorable growth, either as "Dwarf" or "Standard" or both. Those designated as "slow growers" are usually smaller trees.

SUMMER.

✓ **BARTLETT.** Large size, with often a beautiful blush next the sun; buttery, very juicy, and high flavored. Tree a strong grower, bearing early and abundantly; very popular. Last of August and first of September. D. & S.

✓ **CLAPP'S FAVORITE.** A large, new, fine pear, resembling the Bartlett, but without its musky flavor; pale lemon yellow, with brown dots; fine texture, melting, buttery, juicy, with a rich, sweet, vinous flavor. Tree hardy and very productive. A promising fruit of great excellence. Last of July and August. D. & S.

✓ **DOYENNE D'ETE.** Small; melting, sweet; yellowish. Tree vigorous and productive. Early July. D. & S.

✓ **SOUVENIR DU CONGRES.** Recently imported from France, and of great promise. Fruit large and exceedingly handsome; beautiful yellow, with bright red in the sun; melting and juicy, with a musky flavor. September. New.

TYSON. Rather large, bright yellow, with a brown cheek; melting, sweet, and delicious. August. D. & S.

Wilder Early. This variety is a good grower; fruit superior flavor and of good color; a fine keeper and shipper; will ripen here about the last week in July.

We would enumerate the good points of the Wilder Early Pear as follows: 1. Earliness, ripening in Central New York about August 1st. 2. Superior quality, nothing of its season being so delicious. 3. No rotting at the core; it has been kept for weeks in a warm room, and never saw one rot at the core; yet this is the weak spot in nearly all early pears. 4. Long keeping and superior shipping qualifications. 5. Great beauty and productiveness, bearing every year and on young trees. 6. Great vigor, often growing six to seven feet from the bud in one season. 7. Hardiness and strong constitution, which enables it to thrive and endure neglect where many other varieties would prove a failure. 8. Small, meaty core, with few seeds. The core is eaten and is as delicious as any other part. No one would waste the core of the Wilder Early.

1 year old Trees, 30 cents each, \$3. per dozen.

2 year old Trees, 50 cents each, \$5. per dozen, \$35. per hundred.

AUTUMN.

BEURRE D'ANJOU. A large, fine pear; buttery and melting, with sprightly, vinous flavor. Tree a fine grower and good bearer. September and October. D. & S.

DUCHESS L'ANGOULEME. Very large, greenish yellow, sometimes a little russetted; makes a beautiful tree; does best on quince. One of the best. September and October. D.

DOYENNE BOUSSOCK. Large, lemon yellow, a little russetted; melting, juicy, with a sprightly vinous flavor; good grower. August and September. S.

DOYENNE WHITE, (Virgalieu.) Medium, pale yellow, with a faint blush; fine flavor. September. D. & S.

FLEMISH BEAUTY. Large, beautiful, juicy, melting, rich and fine; strong grower and good bearer; hardy everywhere. August and September. D. & S.

HOWELL. Large, light, waxen yellow, with a fine red cheek; handsome, rich, sweet, melting, perfumed aromatic flavor. Tree an upright, free grower, an early and profuse bearer. Very hardy and valuable. August and September. D. & S.

Idaho. A seedling raised from the seed of a large red-cheeked pear by Mrs. Mulkey, of Idaho, who planted the seed about twenty years ago. The tree fruited the fourth year from seed, and has borne annually ever since, seeming to be entirely hardy. As it originated in or near the latitude of Quebec, it has survived winters when the thermometer ranged from 15 to 30 degrees below zero. The trees are upright and vigorous in habit, having a dark, luxuriant foliage, giving the impression that it may be a descendant of the Oriental race of pears, though of much superior quality to any of their known varieties. Very productive of fruit of largest size, weighing from 16 to 23 ounces; form roundish or obovate; flavor pleasant—equal to Bartlett; flesh entirely free from gritty texture; core exceedingly small and often without seeds; later than Bartlett, and a good shipper, having carried 2,000 miles in good condition.

1 year old Trees, 40 cents each, 3 for \$1.

2 year old Trees, 50 cents each, 12 for \$5., \$35. per hundred.

LOUISE BONNE DE JERSEY. Rather large, greenish yellow, with a bright red cheek; juicy, buttery and melting, excellent; very productive; a fine grower on both pear and quince. September. D. & S.

SHELDON. Medium to large; yellow and red; a very excellent and promising variety from Wayne county, New York. Tree a fine grower and productive; must be double worked to grow on quince. September.

SECKEL. Small; rich, yellowish brown; one of the best and highest flavored pears known; productive. September. D. & S.

WINTER.

KIEFFER: A seedling of Chinese Sand Pear; very vigorous; almost free from blight; enormously productive; fruit large, golden yellow with red cheek; very handsome, good quality; excellent for canning. We are planting the Kieffer for commercial purposes. We believe it to be the best, and know it to be a success.



KIEFFER HYBRID.

Mr. W. H. Park, four miles west of Springfield, and near our Nursery grounds, has 400 Kieffer Pear trees now six years old. Two years ago he raised \$400. worth of pears. His last year's crop brought \$700. These trees occupy 2 3-4 acres of ground.

This is the great commercial Pear. Standard trees will bear the second year from setting.

1 year old Trees, 40 cents each, \$4. per dozen, \$25. per hundred.

2 year old Trees, 50 cents each, \$5. per dozen, \$30. per hundred.

LAWRENCE. Above medium; yellow, thickly dotted; a very rich, fine flavor; one of the best. Tree a moderate grower and very productive. October to November. S.

MOUNT VERNON. Medium to large, of a rich russet color; flesh juicy, rich, melting, with a spicy flavor. New. November to January.

VICAR OF WINKFIELD, (Le Cure.) Large, long; not first quality, but desirable for its productiveness. Best on quince. November to January. D. & S.

WINTER NELIS. Medium size; yellowish green and russet; fine grained, melting, rich and delicious; one of the best winter pears. Tree straggling; slender grower, but very productive. December. S.

Pear Trees not specially marked:

2 year old Trees, 50 cents each, \$5. per dozen, \$30. per hundred.

1 year old Trees, 40 cents each, \$4. per dozen, \$25. per hundred.

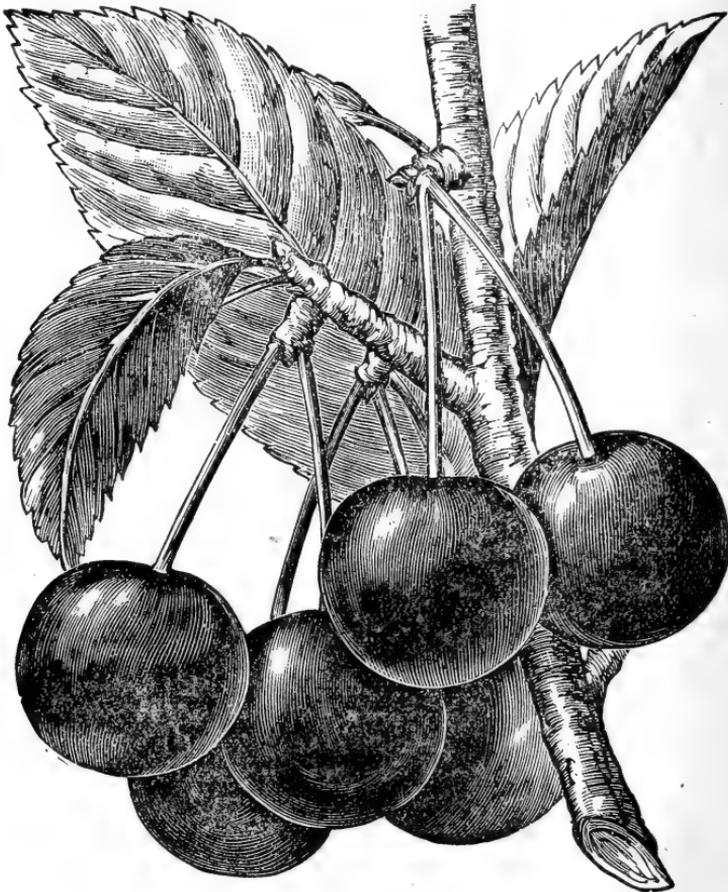
CHERRIES.

The same rules as to soil and culture hold good with Cherries as with pears in the West. Select the dryest and poorest soil you have if you want to grow Cherries successfully, and if you have no light and dry soil, grow only the hardiest varieties, such as Early Richmond, English Morello, etc. The Heart and Bigarreau are apt to grow too rapidly and late, then, after sudden

frost, bursting of the bark and disease follows. On dry, light and strong land, the hardier varieties of Heart and Bigarreau, such as Governor Wood, Early Purple Guigne, Yellow Spanish, Black Tartarian, etc., may also be grown successfully, at least in the Southwest. As a general rule, it will be safest to plant Dukes and Morellos only; the Early Richmond and English Morello standing at the head of the list.

We now employ the Mahaleb stock exclusively, as we find the trees on it more hardy in many cases, and it is adapted to a greater variety of soils.

We include a partial list of the sweet sorts, but do not recommend them for planting in this latitude.



EARLY RICHMOND.

HEART AND BIGARREAU CHERRIES.

BLACK TARTARIAN. Large, purplish-black; half tender, juicy, very rich, excellent flavor Tree a vigorous grower and productive. Last of May or June.

✓ **DOWNER'S LATE RED.** Large, light red; tender, juicy and delicious; vigorous and productive. Middle of June.

✓ **EARLY PURPLE GUIGNE, (Early Purple.)** The earliest fine variety; medium size, heart-shaped; tender, juicy and sweet. Tree rather a slender grower, but very hardy and productive. Middle of May.

✓ **ELTON.** Large, with fine flavor; pale yellow, light red next the sun; vigorous grower. June.

✓ **GOVERNOR WOOD.** Medium, rich; light yellow, with a red cheek, juicy and sweet; one of the very best. First of June.

✓ **KNIGHT'S EARLY BLACK.** Large, black, tender, juicy, rich and excellent; good grower and productive. Last of May.

✓ **NAPOLEON BIGARREAU.** Very large, pale yellow, red cheek; very firm, juicy, and sweet; vigorous grower and very productive. One of the best. Middle of June.

✓ **YELLOW SPANISH.** Large; pale yellow, with red cheek; firm, juicy and excellent; one of the best light colored cherries; vigorous and productive. First of June.

DUKE AND MORELLO CHERRIES,

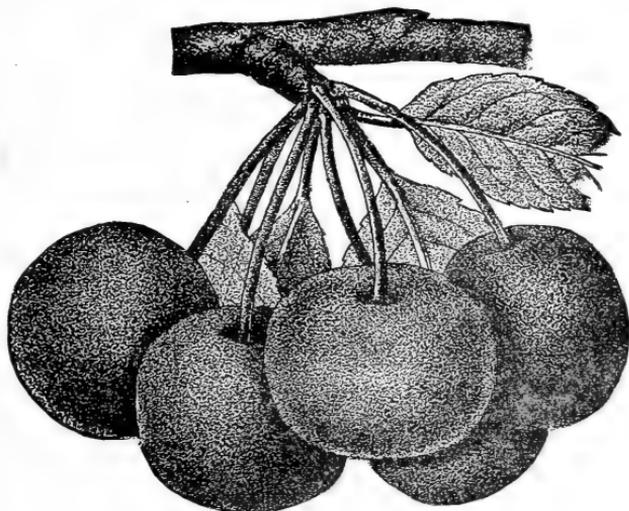
These are for the most part round shaped; fruit generally acid, though some varieties have a very mild, pleasant flavor. The trees are naturally of a smaller growth than the preceding class, and well adapted for Dwarfs or Pyramids. The Morellos are more slender and spreading in habit than the Dukes, which are of stocky, upright growth. Both are more hardy than the Hearts and Bigarreaus, and in large demand where the latter cannot be grown with advantage.

✓ **BELLE MAGNIFIQUE.**
Fruit large, roundish, bright red; flesh tender, juicy, sprightly, sub-acid; one of the finest of this class of cherries. Tree hardy, vigorous and productive. Ripe in July.

✓ **EMPRESS EUGENIE.**
Fruit large, dark red; very rich, tender and sub-acid. A superior variety. Ripe about June.

✓ **ENGLISH MORELLO.**
As the Early Richmond occupies first place

among the earlier sorts, so does the English Morello among the late sorts, as the most profitable variety. Fruit medium to large, dark red, rich, juicy and good; very productive. August.



ENGLISH MORELLO.

✓ **EARLY RICHMOND**, (Kentish, Virginian May.) Medium size, dark red, melting, juicy, sprightly acid flavor. This is one of the most valuable and popular of the acid cherries, and is unsurpassed for cooking purposes. Tree a slender grower, with a roundish spreading head, and is exceedingly productive. The most hardy of all varieties, uninjured by the coldest winters, when every other variety has been killed. Ripens through June.

✓ **LATE DUKE**. Large, light red; late and fine. Last of July.

✓ **LOUISE PHILIPPE**. Large size, flesh red, tender, juicy, with mild sub-acid flavor; very vigorous and productive. A native of France.

✓ **LARGE MONTMORENCY**. A large, red, acid cherry; larger than Early Richmond, and fully ten days later.

✓ **LEIB**. A new Morello, one week later than Early Richmond, and claimed to be very superior.

✓ **MAY DUKE**. Large, dark red, juicy and rich; an old, excellent variety; vigorous and productive. Last of May.

✓ **OLIVET**. A new Duke variety of French origin. Unlike most others of this class, it is said to be very early, and to ripen over a long period. Fruit very large, globular and of a deep shining red; tender, rich and vinous, with a very sweet, sub-acid flavor.

Cherry Trees, 2 year old, 50 cents each, \$5. per dozen, \$25. per hundred.

PLUMS.

✓ **ABUNDANCE**. This is a remarkable fruit indeed; both in tree and fruit it is unlike any other plum. In growth it is so strong and handsome as to render it worthy of being planted as an ornamental tree, equaling in thrift and beauty the Kieffer Pear, which it even excels in early and profuse bearing.

Its propensity to early bearing is such that it loads in the nursery row, bending the limbs with weight of fruit until they sometimes break, and this is the case every year. The curculio has no effect upon it, the eggs failing to hatch and produce the destructive grub, the same as with the Spaulding. The fruit is very large, showy and beautiful. Amber, turning to a rich, bright, cherry color with a decided white bloom and highly perfumed. Season early—August. Stone small and parts readily from flesh.

Trees 5 to 6 feet, 50 cents each, \$4. per dozen, \$25. per hundred.

✓ **DAMSON**. Fruit small, oval; skin purple, covered with blue bloom; flesh melting and juicy, rather tart; separates partly from the stone. September.

Trees 25 cents each, \$2.50 per dozen.

✓ **GERMAN PRUNE**. A large, long, oval variety, much esteemed for drying; color dark purple; of very agreeable flavor. September.

Trees 25 cents each, \$2.50 per dozen.

✓ **GOLDEN BEAUTY**. Round, large as Wild Goose, rich golden yellow; very firm, small seed, nearly free, excellent in quality, immensely productive, very late and valuable.

Trees 25 cents each, \$2.50 per dozen.

✓ **KELSEY'S JAPAN PLUM.** It has proven hardy with us; is a good grower, and is free from disease in every form. Fruit of large size and of finest texture; considered the finest plum grown.

Trees 50 cents each, \$4. per dozen.

✓ **MAGNUM BONUM, RED, (Egg.)** Large, red, firm flesh, sub-acid. First of September.

Trees 50 cents each, \$4. per dozen.

✓ **MAGNUM BONUM, YELLOW, (Egg.)** Large, yellow; fine for culinary purposes, Last of August.

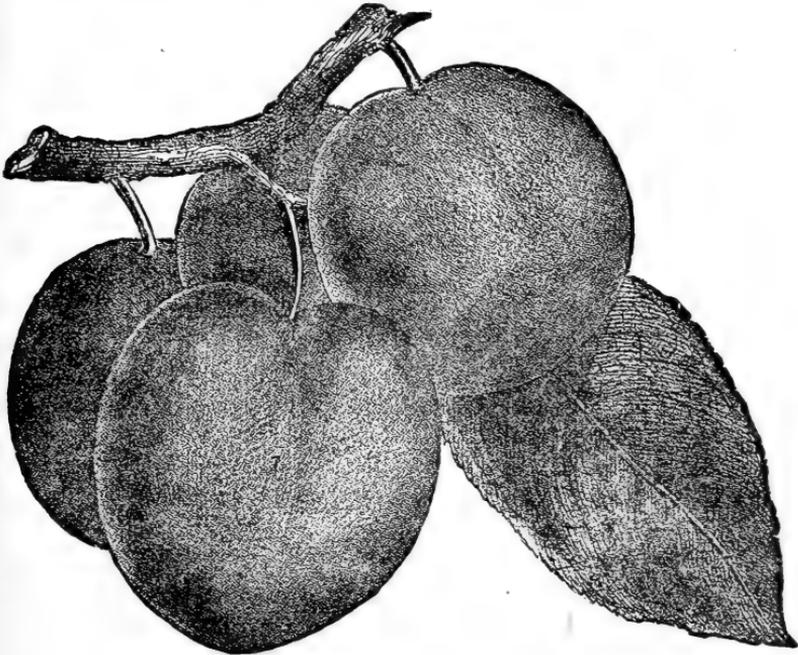
Trees 50 cents each, \$4. per dozen.

✓ **MARIANA.** Seedling of Wild Goose; rapid grower, fruit round, large as Wild Goose.

Trees 25 cents each, \$2.50 per dozen.

✓ **NEWMAN.** Large red, very productive and reliable.

Trees 50 cents each, \$4. per dozen.



ABUNDANCE.

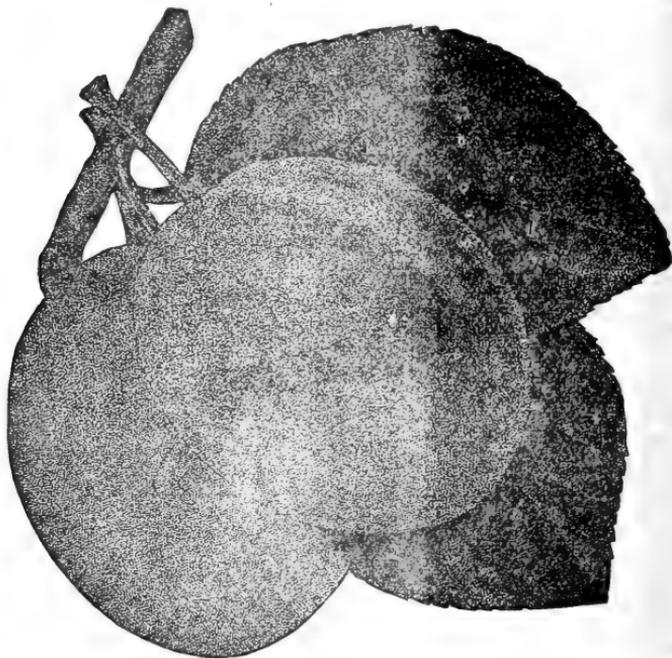
✓ **PRUNUS SIMONI, (Apricot Plum.)** This new plum, a native of Northern China, is believed to be the most valuable new fruit introduced for many years, being hardy as far north as Central Iowa and Nebraska, and in protected situations even farther. Its fruits are very pretty, with a very short stem, size of Orleans Plum, with brick red or dark cinnabar color. The flesh shows a fine apricot yellow, firm, and has a peculiar aromatic flavor not found in the plums we cultivate.

Trees 50 cents each, \$4. per dozen.

SATSUMA, (Blood Plum.) Pit very little larger than a cherry stone; flesh a solid clear red color from pit to skin.

Prof. Van Deman: "One of the most promising, and most vigorous sorts. Tree hardy as Abundance. Equal to Kelsey in size—often 2 inches in diameter—a month earlier, and valuable for the North where Kelsey does not succeed. Its only defect is that it blooms early."

Trees 50 cents each, \$4. per dozen.



SNYDER MAMMOTH PLUM.

Snyder Mammoth Plum. The above cut represents a new plum originated by Richard Snyder, near Springfield, Greene county, Missouri. It is one of the largest plums yet introduced. Almost a prune; dark red in color, fine flavor, small pit, a free stone. Tree, strong, upright grower, good bearer.

Trees 50 cents each, \$5. per dozen.

WILD GOOSE. Large, rich crimson, very productive and perhaps one of the most profitable sorts.

Trees 25 cents each, \$2.50 per dozen.

PEACHES.

The Peach Tree requires a well drained, moderately rich soil—warm, sandy loam is probably the best. The highest ground should always be selected. Many of the stony ridges and hilly slopes in Southern Missouri that are thought to be worthless by the majority of farmers who own them would prove

to be the most valuable lands on the premises if they were planted to peach trees. This fact is being fully demonstrated all along the line of the Gulf R. R. from Springfield south, especially in Howell and adjoining counties, where we have seen peach orchards only three years old, on the very stoniest land, produce \$80. worth of peaches per acre; and trees in their full bearing produce \$300. per acre for a single crop.

In selecting and planting the peach it is best to select a medium size tree; trim to a whip and cut back as low as two feet so as to form a low head with regular branches, thereby avoiding forks.

In order to preserve the continued healthy growth of the tree, and the fine quality of the fruit, the Peach should have the shoots and branches shortened in every year or two, so as to preserve a round, vigorous head; and the land should not be seeded to grass, but kept in constant cultivation.

The following have been selected after an examination of more than one hundred different sorts in bearing, the best only being chosen. They furnish a succession for about four months, commencing the early part of August.

ALEXANDER. Of recent introduction; handsome; of delicious flavor; two to three weeks earlier than Hale's Early. 20th of June.

AMSDEN. New; very early, three weeks before the Hale's Early, and a few days before the Early Beatrice. The tree is hardy, vigorous and very productive, and the fruit has remarkable keeping and carrying qualities. Fruit rather larger than Hale's Early; roundish, a little flattened, with a slight suture. Color red, beautifully shaded and mottled with a very dark red, nearly covering the greenish white ground. Flesh white, with a delicious flavor. 20th of June.

CRAWFORD'S EARLY MELOCOTON, (Early Crawford.) This very beautiful yellow peach is highly esteemed for market purposes. Fruit very large, oblong; skin yellow, with fine red cheek; flesh yellow, juicy, sweet and excellent. Tree very vigorous; tender in bloom here. Last of July.

CRAWFORD'S LATE MELOCOTON, (Late Crawford.) Fruit of the largest size; skin yellow, with bright red cheek; flesh yellow. Tree vigorous, moderately productive; one of the finest late sorts. Last of August.

CHINESE CLING. Large, white, shaded red. August.

ELBERTA. Supposed to be a seedling of Chinese Cling but is entirely free. Very large, yellow with red cheek; flesh yellow, firm, juicy, of high quality; exceedingly prolific, sure bearer and hardy. Thousands of acres have been planted in the South, where it is regarded as the best market variety. It is proving to be equally as valuable in the North, is highly recommended by G. H. Hale, the Connecticut peach grower. It is rapidly becoming popular, and promises to be the best general



1-5 NATURAL SIZE.

peach for all sections. Follows Early Crawford.

✓ **EARLY RIVERS.** Another new variety; large, light straw color, with delicate pink cheek; flesh juicy and melting, with very rich flavor. Ripens close after the Louise, and one or two weeks earlier than Hale's. 5th of July.

✓ **Family Favorite.** Large size, first quality; a free stone; a splendid sort. Season, August.

✓ **FOSTER.** Originated in Medford, Mass. Large, deep orange red, becoming very dark on the sunny side; flesh yellow, very rich and juicy, with sub-acid flavor. Earlier than Early Crawford. Very handsome. The originator says he has sold the fruit readily at \$12. per dozen peaches. New.

✓ **GLOBE.** Large, flesh very firm, juicy, yellow, shaded with a redish tinge toward the pit; quality, good, pleasant, rich, vinous and luscious. October.

✓ **GUDGEON'S SEEDLING.** Large; white flesh, red cheek, very attractive; fine quality, good shipper. October.

✓ **GOVERNOR GARLAND.** From Bentonville, Arkansas. A week earlier than Amsden, and of superior quality. New. A good sort.

✓ **HEATH CLING.** Large, white, juicy and rich. October.

✓ **MOUNTAIN ROSE.** Large, red, flesh white, juicy, excellent. August.

✓ **MORRIS WHITE.** Medium, straw color, tinged with red; juicy and delicious; productive. Middle of September.

✓ **OLD MIXON CLING.** Large, pale yellow, red cheek. Last of September.

✓ **OLD MIXON FREE.** Large, pale yellow, deep red cheek, white flesh, tender, rich, good. September.

✓ **PICQUIT'S LATE.** Good size, free stone, whitish color; good flavor; one of the best late sorts. September and October.

✓ **RED CHEEK MELOCOTON.** Large, yellow, deep red cheek, rich and vinous. September.

✓ **SNOCK FREE.** Large, yellow and red, bright yellow flesh. Valuable for market. Last of September.

✓ **SUSQUEHANNA.** Very large, yellow and red; one of the handsomest. Last of August.

✓ **SALWAY.** Large, creamy yellow, crimson red cheek, flesh deep yellow, juicy, rich, sweet. October.

✓ **STUMP THE WORLD.** Very large, white, with a bright red cheek. End of September.

✓ **STEADLEY.** Originated at Bluffston, Missouri. Free stone, ripens later than Heath Cling; white, with faint blush on sunny side; juicy, fine flavor, delicious. First of October.

✓ **WONDERFUL.** Large, color rich golden yellow, largely overspread with vivid carmine. Flesh yellow, rich, high flavored and delicious, exceedingly firm; bright red at the pit. October.

Peach Trees, 5 to 6 feet, 20 cents each, \$15. per hundred.

Peach Trees, 4 to 5 feet, 15 cents each, \$12.50 per hundred.

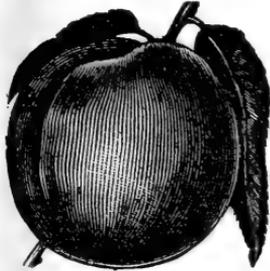
Peach Trees, 3 to 4 feet, 12 1-2 cents each, \$10. per hundred.

Peach Trees, 2 to 3 feet, 10 cents each, \$7. per hundred.

Prices per thousand on application.

VARIETIES OF SPECIAL MERIT.

CHAMPION. Originated at Nokomis, Illinois. Has been carefully tested for a series of years. It first attracted attention by the regularity of its bearing in a region not adapted to peach culture, a quality which alone would place it in



$\frac{1}{3}$ NATURAL SIZE.

the front rank of profitable orchard varieties. The crowning event in its history was the production of a full crop in 1890, when the peach crop was a universal failure. During the winter of 1887-8 the Champion withstood a temperature of 18 degrees below zero, and produced an abundant crop the following season. Many specimens have measured ten inches in circumference. The flavor is delicious, sweet, rich and juicy, surpassing all other early varieties; skin creamy white with red cheek; strikingly handsome. It ripens at Nokomis about August 5th. It is hardy, productive,

early, the largest size, highest flavored and best shipper of the early peaches, and the only perfect free stone.

Galland June.

This excellent new Peach, we believe, is justly entitled to be termed the "earliest of earlies." It was first brought to notice in 1877, by Mrs. S. W. Galland, of Bolivar, Missouri, who found it among other volunteer seedlings standing in an old neglected back lot, or orchard, among thorns and briars, and supposed to be three years old. Notwithstanding the neglected condition of the tree it was loaded with nice, ripe, mellow fruit, this being only the 7th day of June. The following season the attention of some of the leading horticulturists of the town was called to it to examine it, and all agreed that it possessed a number of valuable points over any variety known. First, its ripening five to eight days earlier than the Amsden June, or any other variety they knew of. Size and form, as well as its beautiful coloring, were also above anything they knew. And, the most important of all, it was ripe through and through, possessing a sweet and delicious flavor, and clear of that green, woody-like substance so common among many early sorts. The tree is a fine, strong, healthy, uniform grower, hardy and a good bearer. The young budded trees, three years old, stood beside Amsdens of the same age, and both varieties were full of fruit, the Galland was good ripe five to eight days before the Amsden would do to use at all. They were good ripe the 5th day of June, 1880.

We give here a report as clipped from the Bolivar *Free Press* of same week:

THE EARLIEST PEACH KNOWN.

On the 5th inst. Mrs. S. W. Galland, the proprietor of this peach, invited a number of well-known gentlemen, who are amateur horticulturists, to examine a new peach, which has for two seasons matured earlier than any peach yet known—earlier even than than the famous Amsden. The result of their observations is given in the following report:

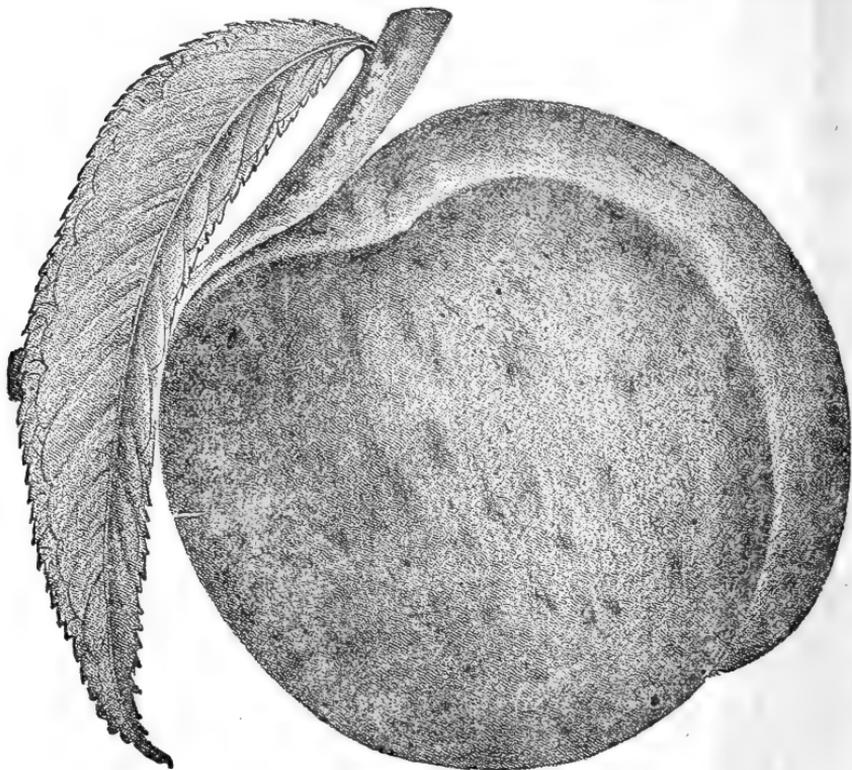
"The undersigned, upon invitation from Mrs. S. W. Galland, visited her

residence, in Bolivar, Polk county, Missouri, on the 5th day of June, 1878, and by request, inspected a peach tree and the fruit growing upon it.

"This is the second season the tree has borne. We plucked peaches from the tree with our own hands. The peaches are fair for size, one measuring seven inches in circumference. They are of the half cling variety, and of a deep red color upon one side which will probably nearly, or quite cover the peach when fully ripened. This peach we consider ripe and in good shipping order. The flavor of the peach is fully equal to any of the early varieties; the color of the flesh is creamish white, and that of the seed white.

"This peach, we think, is a good keeper, would ship well, and is especially rich in the coloring greatly prized by fruit dealers.

"The tree, we judge to be four years old; are satisfied that it is a seedling,



GALLAND JUNE.

and a new variety, being the earliest peach that we have ever seen, or have any knowledge of.

"The tree stands in open ground in the orchard, and does not appear to have received any special care or cultivation.

"W. C. RITTENHOUSE,
"JNO. W. ROSS,

"WILLIAM CAREY,
"H. C. SEA."

Size: Above medium of early varieties, seven to eight inches in circumference.

Form: Round, smooth, with shallow suture on both sides, running from stem, partly up the side. Stalk in round rather deep. Cavity apex, rather full.

Color: Creamish white, striped or mottled, with beautiful crimson covering two-thirds of fruit.

Flesh: Creamish white, with rich, juicy, vinous flavor, adheres to stone about like Hale's or Amsden.

Season: Fifth to tenth of June.

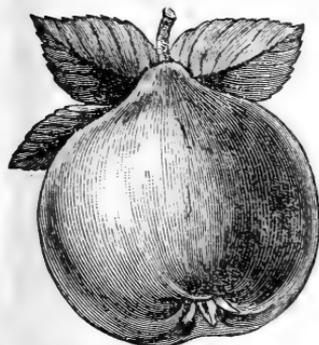
✓ **Madison County Mammoth.** Originated in Madison county, Arkansas. One of the largest peaches yet introduced. Beautiful golden yellow; fine flavor; a good shipper, and no doubt a valuable acquisition to the list of good peaches.

Prices of special sorts, 50 cents each, \$4. per dozen, \$25. per hundred.

QUINCES.

The Quince is of late attracting a great deal of attention as a market fruit. Scarcely any fruit will pay better in the orchard. The tree is hardy and compact in growth, requiring but little space, productive, gives regular crops, and comes early into bearing. The fruit is much sought after for canning for winter use. When put up in the proportion of about one quart of quinces to four of other fruit, it imparts to them a most delicious flavor. The Quince should be planted on a north or west slope, on good, well-drained soil.

APPLE OR ORANGE. Large, roundish, bright golden-yellow; cooks tender, and is of very excellent flavor. Valuable for preserves or flavoring; very productive; the most popular and extensively cultivated variety. September.



ORANGE QUINCE, $\frac{1}{3}$ SIZE.
handsome, rich yellow; flesh tender, and cooks free from lumps.

✓ REA'S MAMMOTH. A seedling of the Orange Quince, one-third larger, of the same form and color; fair, handsome, equally as good, and said to be as productive. Tree a healthy, thrifty grower.

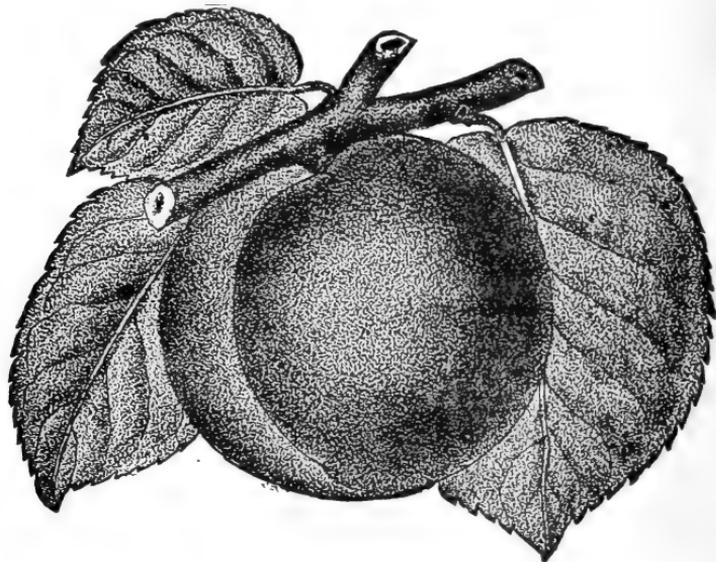
Quince Trees, 2 year old, 50 cents each, \$4. per dozen, \$25. per hundred.

MEECH. Strong grower, enormously productive, and comes to bearing very young. The fruit is remarkable for its fine form and color, high fragrance and flavor, large size, bright orange-yellow, very handsome, and unsurpassed for cooking.

✓ CHAMPION. Very hardy and prolific, commencing very young, often at two and three years old in nursery rows; very large, showy and

APRICOTS.

A delicious fruit, valuable for its earliness. It is liable to be attacked by the curculio, and requires the same treatment as the plum. It bears immense crops, ripening in July and August.



J. L. BUDD.

✓ EARLY GOLDEN, (Dubois.) Small, pale orange, juicy and sweet; hardy and productive. First of July.

✓ MOORPARK. One of the largest, orange, with a red cheek; firm, juicy, with a rich flavor; very productive. August.

RUSSIAN APRICOTS.

These are quite distinct from the European varieties, hardier, and will produce fruit when other Apricots fail; recommended where peaches cannot be grown. They are all early bearers and productive.

✓ ALEXANDER,

✓ ALEXIS,

✓ CATHERINE,

✓ GIBB,

✓ J. L. BUDD,

✓ NICHOLAS.

NECTARINES.

A most delicious, smooth-skinned fruit, which thrives wherever peaches will grow, but is liable to be stung by the curculio, and requires the same treatment as plums. Ripens in August.

EARLY VIOLET. Medium size; yellowish green, nearly covered with dark purplish red; juicy, rich and high flavored. First of August.

ELRUGE. Medium size; pale green, with a dark red cheek; flesh pale green; very juicy and rich. Middle of August.

RED ROMAN. Large size; greenish yellow, with a dark, dull red cheek; flesh yellowish, fine and rich; fine grower and productive. Middle of August.

50 cents each, \$4. per dozen.

GRAPES.

The vine comes quickly into bearing, yielding fruit usually the third year after planting, requires but little space, and, when properly trained, is an ornament to the yard, garden or vineyard.

It is stated by some of the most eminent physiologists, that among all the fruits conducive to regularity, health and vigor in the human system, the Grape ranks number one. We hope soon to see the day when every family shall have an abundant supply of this most excellent fruit for at least six months of the year.

We are giving our attention to the growing of vines of all valuable hardy varieties. Those who have been disappointed by the late and imperfect ripening of the Isabella and Catawba, can now obtain Grapes that are better in quality, and far earlier in ripening than they.

While vineyards, if allowed, will sometimes produce four tons to the acre, it is not best for the health of the vine and uniformity of yearly crops, to suffer more than half this amount to grow, or two tons per acre.

The soil for the grape should be dry; when not naturally so it should be thoroughly drained. It should be deeply worked, always bearing in mind that it is an essential point to secure a warm, sunny exposure, but more than all, a free circulation of air, as a preventive of rot and mildew, which are often so destructive to the crop.

The best grape vine trellis is probably the wire trellis. This is constructed by planting posts as far apart as you choose to have the length of your trellis; stretch the wires, four in number, about eighteen inches apart; letting them pass through stakes at proper distances from each other to support the wire. As the wires are contracted by the cold, and are likely to break, or sway the posts from their places, they should be loosened as cold weather approaches.

To secure the best results, annual and careful pruning are essential. The following is regarded as the best method: Commencing with a good strong vine, such as we furnish, permit it to grow the first season without pruning. In November or December following cut back the growth, allowing but three or four buds to remain. The following Spring allow but two of the strongest

buds to throw out shoots. These, in the Fall, will be from seven to ten feet long, and should be cut back to within four or five feet of the root. The next Spring the vine should be fastened to the lower part of the trellis. When growth commences, pinch the buds so that the shoots will be from ten to twelve inches apart. As these grow, train them perpendicularly to the second, third and fourth bars of the trellis.

Grapes may be kept through the Winter in small boxes holding three to five pounds, if placed in a cool, dry room, of even temperature; or they may be spread out to dry for two days, and then laid in market baskets, and suspended in a cool, dry cellar.

Out of the many varieties now propagated, we give the description of some of those that we think the most hardy and profitable to plant.

BRIGHTON. A cross between the Concord and Diana Hamburg. It gives the best of satisfaction as far as tried. Bunches large, berries of medium size, dark red; flesh sweet, tender, and of the highest quality. Ripens one week earlier than the Delaware, and being most vigorous and hardy, it promises to become fully as popular.

CATAWBA. Well known as the great wine grape of Ohio, Kentucky, etc.; bunches large and loose; berries large, of a coppery red color, becoming purplish when well ripened; two weeks later than the Isabella; good, but too unhealthy to be relied upon.

CYNTHIANA. Very similar to Norton's Virginia; the most valuable red wine grape we have, making a wine not quite so dark and astringent, but of a finer and more delicate flavor; always reliable, one of the surest grapes we have; keeps remarkably well, and is very sprightly and spicy; a good grape for winter use.

CLYNTON. A grape of medium size in bunch and berry; like Norton's Virginia, it is free from mildew and rot, which makes it a very valuable sort.

CONCORD. A popular variety where the choicer kinds fail to ripen; universally healthy; vigorous and productive; flesh somewhat buttery, moderately juicy and sweet. Bunch large, nearly black with bloom; early. It can truly be said that the Concord is the Ben Davis of the Grape family.



CONCORD.

✓ **DELAWARE.** Still holds its own as one of the finest grapes. Bunches small, compact, shouldered; berries rather small, round; skin thin, light red; flesh very juicy, without any hard pulp, with an exceedingly sweet, spicy and delicious flavor. Vines moderately vigorous, very hardy and productive; ripens two weeks before the Isabella. Not reliable at the South, as its foliage is too tender to withstand the hot sun.

✓ **EATON.** A new sort. Very large in bunch and berry; of fine quality; medium season; color black; hardy as far as tested.

✓ **ELVIRA.** Originated with Mr. Jacob Rommel, Morrison, Missouri, and seems to succeed wherever grown; one of the best and most reliable table and wine grapes, and so hardy that it will endure the coldest winters without flinching; bunch medium, very compact; berry medium, greenish white, sometimes with faint amber tinge in the sun, transparent; thin skin, without pulp, very sweet and juicy; makes a very fine white wine, resembling Riessling. Very productive.

✓ **HARTFORD PROLIFIC.** Bunches rather large, berries large, globular, color almost black, covered with a beautiful bloom; flesh sweet and juicy. Ripens two weeks before the Isabella; valuable for its hardiness, abundant bearing and early maturity. One of the best.

✓ **MARTHA.** Tested in Missouri for fourteen years, good and reliable; sweeter and better than its parent, the Concord, though not so large in bunch or berry; bunch and berry medium, greenish white, juicy and sweet, but somewhat foxy; earlier than Concord. Very hardy and productive.

✓ **MOORE'S EARLY.** Originated in Massachusetts; said to be two weeks earlier than Hartford, and much better in quality; not tested here, but grows vigorous and healthy.



MOORE'S DIAMOND.

✓ **Moore's Diamond.** The new, early, white grape. From seed of Concord fertilized with Iowa; one of the most valuable sorts. Produced by Jacob Moore. Very fine in flavor; also partakes of the hardiness of the parent Concord, and is two to three weeks earlier.

✓ **MISSOURI RIESSLING.** Originated with Nicholas Grein, Hermann, Mo. A very fine and very hardy and healthy grape; a seedling from Taylor. Bunch and berry medium, compact, pale yellow, changing to amber when very ripe; sweet, juicy and vinous; very tender pulp; quality best for table, and also makes a very fine wine resembling the famous Riessling. Should be planted by everyone, as it is

healthy and hardy even at the extreme North.

✓ **Moyer.** The new red Grape; said to be equal to the Delaware in all respects, as a fine grape, with the advantage of being much hardier.

✓ **NORTON'S VIRGINIA.** Well known as one of the most reliable and healthy wine grapes; will also keep well for winter use, and though small, is very sprightly.

✓ **NIAGARA.** One of the finest of the white grapes. Large bunch and berry; juicy and sweet. New, but tested.

✓ **Golden Packlington.** Worthy of a place in any vineyard. A white grape with golden tinge; hardy and productive; large bunch and berry; a little earlier than Concord.

WORDEN. This, we think, is one of the best black grapes for this climate, and will prove satisfactory to all who plant it.



NIAGARA.

PRICE LIST.

- Concord, 2 year old, 10 cents each, \$1. per dozen, \$5. per hundred.
 1 year old, 8 cents each, 75 cents per dozen, \$4. per hundred.
- Elvira, Martha, Hartford Prolific, Brighton and Clynton,
 2 year old, 15 cents each, \$1.50 per dozen, \$8. per hundred.
 1 year old, 12 1-2 cents each, \$1.25 per dozen, \$7. per hundred.
- Catawba, Cynthiana, Delaware, Moore's Early, Missouri Riessing, Norton's Virginia, Niagara, Golden Packlington and Worden.
 2 year old, 20 cents each, \$2. per dozen, \$12. per hundred.
 1 year old, 20 cents each, \$1.75 per dozen, \$10. per hundred.
- Moyer, Moore's Diamond and Eaton,
 2 year old, 50 cents each, \$4. per dozen.

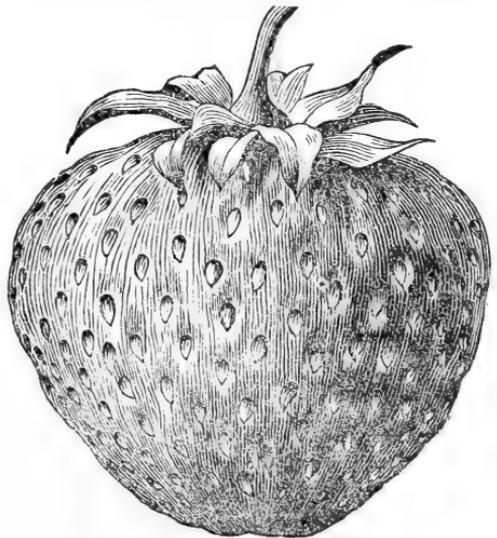
SMALL FRUITS.

The small fruits, such as Strawberries, Raspberries, Blackberries, Gooseberries, Currants, etc., ripening from the middle of May until Fall, are everywhere capable of successful cultivation, and yield large returns at comparatively small expense. They should have a place in every garden. Since the introduction of self-sealing jars and cans, they can be had throughout the year, almost as fresh as when gathered.

STRAWBERRIES.

First of the Small Fruits, in the month of May comes the beautiful, wholesome and appetizing Strawberry. The profits which may result from its cultivation, when properly conducted, are enough to satisfy the highest expectations. On a sandy and gravelly loam, the well-known author of the "Fruit Garden," Mr. P. Barry, of Rochester, planted Wilson's Albany, and picked at the rate of almost three hundred bushels per acre, averaging about one thousand dollars. This is enormous, but shows what can be done under favorable circumstances.

Plant in March, April, May, September or October, on good ground, deeply worked and well manured. Vegetable manure (muck, rotted turf, woodsoil, ashes, etc.) is the best. Bone-dust is excellent. Set in 4 feet rows, 15 inches apart in row for field culture; and 15 inches each way for garden, leaving a pathway at every third row. Keep in hills with runners cut, unless troubled with the white grub. Cultivate clean, mulch late in Fall, uncover crowns early in Spring, remove mulch after fruiting, and spade in a light dressing of manure.



BUBACH NO. 5.

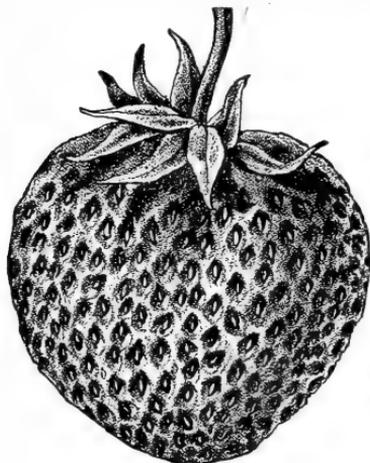
GENERAL COLLECTION.

✓ **BUBACH'S No. 5 (p.)** Combines many excellent qualities, such as great and uniform size, fine form and color, good quality of fruit, unsurpassed productiveness, and great vigor of plant. It ripens almost as early as the Crescent, and continues about as long in bearing, and fully as prolific; leaves large and dark.

✓ **CRESCENT SEEDLING (p.)** Medium size, bright light scarlet; continues a long time in fruit; plant very vigorous and hardy and will produce good crops under greater neglect than any other strawberry.

✓ **CHARLES DOWNING.** Fruit medium to large, conical; deep scarlet, fine flavor; productive.

✓ **CUMBERLAND TRIUMPH.** A magnificent variety; berries immense, fine, perfect form, and of fine flavor; plant very vigorous and productive.



GREAT PACIFIC.

berries bright crimson, uniform size and shape, large, firm and ripens late; plant healthy and vigorous.

✓ **HAVERLAND (p.)** Plants are very large, healthy, vigorous, and ripen their fruit evenly and early, holding on through the season. Berries are fine, uniform in shape, very large, excellent flavor and bright red color. One of the best market varieties.

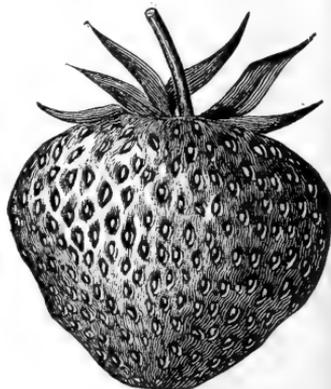
✓ **JESSIE.** Plant stout, luxuriant grower, foliage light green, large and clean. The berry is very large, continuing large to the last picking. It is of beautiful color, fine quality, good form, colors even, with no white tips. Very firm.

✓ **MICHEL'S EARLY.** The earliest variety, resembles Crescent, but ripens several days earlier and is much firmer. Planted

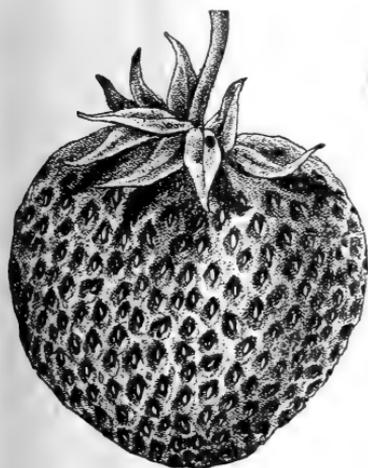
✓ **CAPT. JACK.** Originated with Samuel Miller, of Bluffton, Missouri. Similar to Wilson's Albany, of which it is a seedling, but of brighter color, better quality, larger, and of more uniform size. Very productive wherever tried, and as it is very firm, is also an excellent shipping berry.

✓ **GREAT PACIFIC (p.)** A very strong, robust grower, originating in Illinois, where it is claimed to be the best and most profitable variety grown. Hardy, healthy, and an immense producer of medium size, firm, handsome berries; mid-season. Well worthy of a trial in all sections for a market berry.

✓ **GANDY.** A cross between Jersey Queen and Glendale, possessing some of the good qualities of each, making a valuable late variety.



GANDY.



MICHEL'S EARLY.

largely and giving the best of satisfaction as a market berry South. Not prolific enough for a standard market variety in the North.

SHARPLESS. Has retained its high reputation for vigor of plant, size of berry, flavor and productiveness; flesh firm, sweet; with a delicate aroma; of fine quality, color clear light red, with a smooth, shining surface.

WARFIELD. It is not immensely large, but its great beauty, firmness, earliness, good flavor, productiveness and vigor, combined with good size, make it exceedingly popular. Ripens with Crescent, and is superseding that variety for a reliable market berry.

✓ **WILSON'S ALBANY.** Large, conical, dark red; firm, hardy, prolific, rather acid.

PRICE LIST.

Jesse, Sharpless, Wilson's Albany, Capt. Jack, Chas. Downing,

Plants, 25 cents per dozen, \$1. per hundred.

Michel's Early, Bubach No. 5, Cumberland Triumph,

Plants, 40 cents per dozen, \$1.50 per hundred.

Gandy, Haverland,

Plants, 50 cents per dozen, \$2. per hundred.

Great Pacific, (New,)

Plants, 75 cents per dozen, \$3. per hundred.

Prices per thousand on application.

RASPBERRIES.

This fruit comes just after strawberries, and, when properly cultivated, is quite profitable. Plant on strong soil, manure freely, cultivate well or mulch heavily. For field, rows six feet apart, four feet in row. Pinch off canes when three feet high, and prune off laterals the following Spring, within twelve or eighteen inches of the cane. The best and cheapest support for them is a single wire, stretched over small posts, set ten feet apart, and two and a half feet high, to which the canes are tied in fan-shape with willows or strings in the Spring. Cover tender varieties in Winter by bending down and throwing on earth.

Raspberries are classed under two heads, Red, and Black Cap. We only give descriptions of a few of the best and hardier sorts.

BLACK CAPS.

✓ **GREGG.** This is one of the old tried sorts and is perhaps the best of the late sorts. Fruit large and of good flavor.

✓ **HOPKINS.** This is no doubt the best Black Cap for Central and Southern Missouri, and Northern Arkansas. Originated and introduced by G. W. Hopkins, one of the pioneer horticulturists of the State, while in the small fruit business near Kansas City. Mr. Hopkins came to Springfield several years ago and engaged in the small fruit business, and he says the Hopkins Raspberry is decidedly the best for this locality of any that he has tried.



HOPKINS.

✓ **JOHNSTON'S SWEET.** Remarkably sweet, and of great value for evaporating and canning purposes. The canes are of strong, vigorous growth, with healthy and clean foliage, hardy and productive. The berries are of a deep black color, quite firm, very sweet, and delicious in flavor. Ripens early.

✓ **MCCORMICK (Mammoth Cluster.)** Of all the Black Cap family this has proved the most wonderful in productiveness, size and uniformity of fruit, and stockiness and hardness.

of plant, of any sort we have ever grown. The bush is a strong, upright grower; foliage a rich dark green; fruit large, and holds out large to the very last picking; black, with a rich purple bloom; very juicy, high flavored, and delicious; perfectly hardy; the surface sufficiently firm to bear transporting to distant markets.

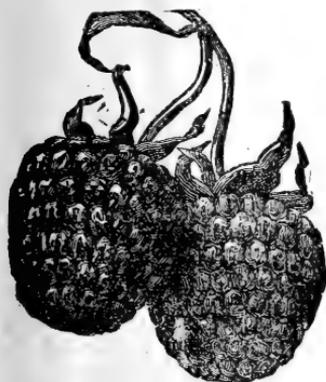
✓ **SOUHEGAN OR TYLER.** One of the earliest Black Raspberries, and the leading early market sort. It ripens its entire crop within a very short period, a desirable feature when it precedes second early sorts. Canes vigorous, strong and hardy, with foliage healthy, and free from rust; wonderfully productive. Fruit of good size, jet black, with but very little bloom, firm, and sweet pleasant flavor.

Black Caps, 50 cents per dozen, \$1.50 per hundred.

Prices per thousand on application.

RED RASPBERRIES.

✓ **CUTHBERT, OR QUEEN OF THE MARKET.** A remarkably strong, hardy variety; stands the Northern Winters and Southern Summers equal to any. Berries



CUTHBERT.

fifteen-sixteenths of an inch in diameter; 100 berries weigh 11 ounces. There are no small berries on the bushes. They are all of a uniform large size, with very few seeds. Flavor delicious, aromatic and sprightly. It outsells other varieties in the market. Excellent for canning or jellies, jams, etc.; berries do not crumble in picking. Ripens earlier than Cuthbert, larger, more productive and better quality. Combining to a remarkable degree the large size and superior qualities of the best foreign varieties, with the vigor, hardiness and productiveness of our native sorts, we have indeed a Royal Raspberry.

Prof. H. E. VanDeiman U. S. Pomologist, at Washington, D. C., says: "Royal Church is one of the best of the red varieties. The fruiting branches are long and heavily laden with green and ripe fruit. Berry large, round, juicy, of rich flavor.

We also have received about fifty letters, mostly from the experiment stations of different States, giving reports on the Royal Church Raspberry. All report it perfectly hardy, and no experiment station makes any unfavorable comment. All speak of its superior quality, size, and productiveness.

Plants, 50 cents each, \$5. per dozen.

SHAFFER'S COLOSSAL. An immense Raspberry both in cane and fruit, and especially adapted to the South. Canes are of wonderful vigor and size, hardy and enormously productive. Berries are very large, of a dull, purplish, unattractive color, rather soft, but luscious and of a rich, sprightly flavor. Whilst its color and lack of firmness render it unfit for market purposes, it is unrivaled for family use, and is one of the best for canning. Late.

Plants, 50 cents per dozen, \$2. per hundred.

TURNER. The Turner is valuable on account of its early ripening and fine quality. It is full medium size and of fine red color. The bush is very hardy,

very large, measuring three inches around; conical; rich crimson, very handsome, and so firm they can be shipped hundreds of miles by rail in good condition; flavor is sweet, rich and luscious. The leading market variety for main crop.

Plants 30 cents per dozen, \$1. per hundred.

Hansell. This is the earliest of the Red sorts. Sweet and delicious; a good bearer.

Plants 30 cents per dozen, \$1. per hundred.

Royal Church. A very large, strong growing cane of the Cuthbert type; thorns few and small, canes perfectly hardy. Continues in bearing three or four weeks, is very productive, over 150 berries having been counted on a single branch. The size of berries is seven-eighths to



ROYAL CHURCH.

standing uninjured where many varieties have winter-killed outright.

Plants, 30 cents per dozen, \$1. per hundred.

YELLOW.

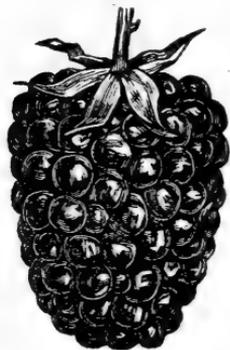
GOLDEN QUEEN. This may be termed a golden Cuthbert, as it is a seedling or sport of that popular variety. Its leading characteristics are large size, great beauty, high quality, hardiness and productiveness. This superb new Raspberry is destined to more than fill the place of that old luscious yellow Raspberry, Brinkle's Orange, as it gives us the same handsome, large, golden berries, without the nursing and care the Brinkle's required to bring the canes alive through the Winter. The canes are of the strongest growth. It is wonderfully productive, ripening in mid-season, and will be planted extensively for market, and no home garden should be without it.

Plants, 50 cents per dozen, \$2. per hundred.

Prices on all plants per thousand on application.

BLACKBERRIES.

Blackberries should be planted in rows six to seven feet apart, three to five feet in the rows. Keep the ground light and rich. Pinch the canes back when they have reached four feet in height.



✓ **ANCIENT BRITON.** Brought from Wales; has gradually risen in public estimation upon its own merits to the highest place as a profitable and valuable berry. The plant is very vigorous and healthy, and extremely hardy; the fruit stems are large and profusely loaded with immense luscious berries. Fetches the highest price in market, stands the severe Winters of Wisconsin, and is, we consider, the best hardy market variety.

10 cents each, \$1. per dozen, \$5. per hundred.

✓ **AGAWAM.** Fruit of fair size, jet black, sweet, tender and melting to the very core; for home use it has no superior, being sweet throughout as soon as black; it is extremely hardy and healthy and very productive. An eminent small fruit grower says, "It stands at the head for hardiness, fruitfulness and sweetness." No fruit garden should be without this excellent variety.

10 cents each, 75 cents per dozen, \$3. per hundred.

✓ **EARLY HARVEST.** One of the earliest Blackberries in cultivation; a compact dwarf grower; fruit medium size and fine quality; an enormous bearer. It is so early and bears so well, eats so well, ships so well, and sells so well, that it is of very notable value to a large portion of our country. Not perfectly hardy here, and in this latitude and further north; needs protection during the Winter.

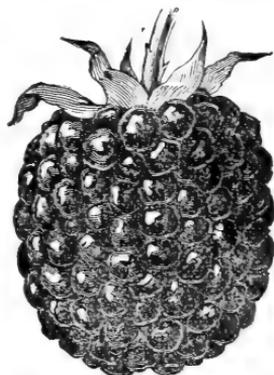
5 cents each, 50 cents per dozen, \$2. per hundred.

✓ **ERIE.** One of the best hardy varieties, having stood unharmed a temperature of 25 degrees below zero; as vigorous as Kittatinny; very productive, not having failed in producing a fine crop each year since it originated; foliage clean and healthy, free from rust; fruit large, round in form, giving it the appearance of being even larger than it really is; good quality; ripens between Early Harvest and Wilson Junior.

10 cents each, \$1. per dozen. \$4. per hundred.

KITTATINNY. Commences to ripen after the Wilson's Early, and continues longer in bearing; is ripe as soon as black, and much earlier, sweeter and better in every respect than the Lawton. One of the best.

5 cents each, 50 cents per dozen, \$1.50 per hundred.



ERIE.

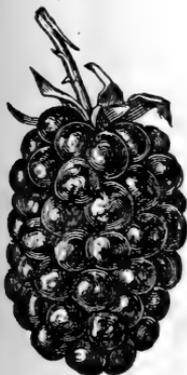
TAYLOR. One of the largest Blackberries grown. Fruit of the best quality, melting, and without core; productive; hardy as the Snyder, which renders it very valuable.

5 cents each, 50 cents per dozen. \$2. per hundred.

✓ **SNYDER.** Extremely hardy, enormously productive; medium size, no hard, sour core; sweet and melting. The most popular variety where hardiness is a consideration.

5 cents each, 50 cents per dozen.
\$1.50 per hundred.

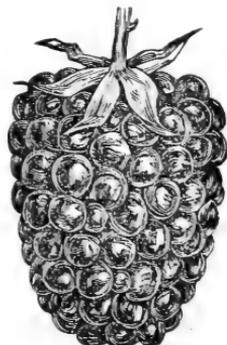
WILSON'S EARLY. Of good size, very early, beautiful dark color, of sweet, excellent flavor, and very



TAYLOR.

productive. Ripens the whole crop nearly together.

10 cents each. 75 cents per dozen, \$2.50 per hundred.



WILSON'S EARLY.

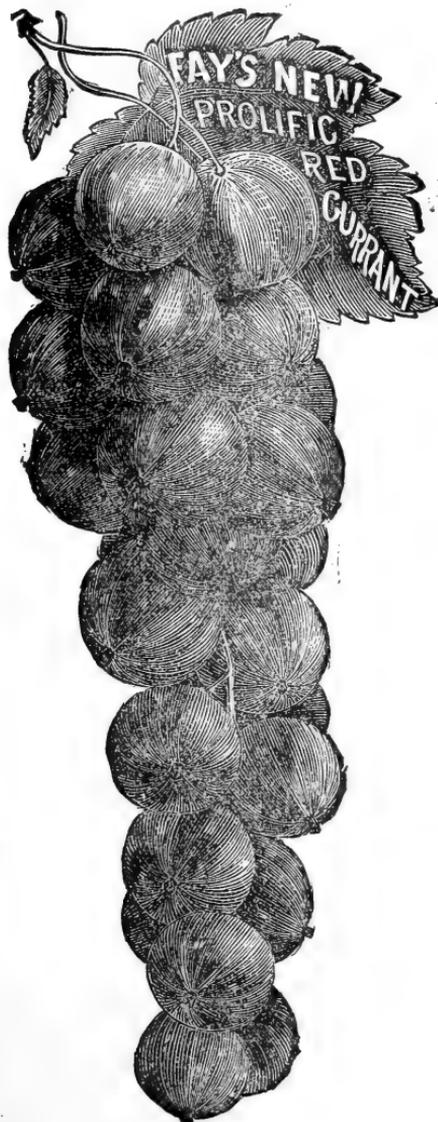
DEWBERRIES.

✓ **LUCRETIA.** In earliness, size and quality, it equals any of the tall-growing sorts; the plant is perfectly hardy, healthy, and remarkably productive, with very large, showy flowers. The fruit, which ripens early, is soft, sweet and luscious throughout with no hard core; ripe before late raspberries are gone. Should be mulched to keep berries from ground. The most profitable small fruit we cultivate.

10 cents each, 25 for \$1, \$2.50 per hundred.

CURRENTS.

This fruit comes partly with the raspberry, but follows it for several weeks. Indeed, none of the small fruits will remain so long upon the bushes without injury as the Currant, and since the introduction of the newer varieties, and the easy method of destroying the currant worm by the use of powdered white hellebore (*Veratum Album*), the Currant is attracting more notice than ever



before. If remuneration be the object with fruit growers, we certainly have it here. From recent minutes of the Geneva Horticultural Society, it appears that Rev. Dr. Cannon, of Geneva, from one-sixteenth of an acre, sold fifteen bushels besides what he appropriated for family use.

Set four feet apart in rich ground. To cultivate successfully at the West, in our hot suns, they should be planted on the north side of a fence or buildings where they will be partially shaded, and where cultivated in open ground, very heavily mulched with coarse manure, straw or litter. Always plant on a northern exposure, if possible, in well-drained but moist soil. Prune out old wood, so that each remaining shoot will have room to grow; if the currant worm appears, dust with hellebore every three weeks. Manure freely.

✓ **CRANDALL.** A black seedling of the western wild currant. Distinct from the European black varieties and without their strong odor. Wonderfully productive, a strong, vigorous grower, usually producing a crop the next year after planting; large size, one-half to three-quarters of an inch in diameter; easily picked; can be shipped farther and kept longer than any other small fruit. Free from all attacks of insect enemies.

20 cents each, 6 for \$1.

✓ **CHERRY.** Berries sometimes more than half an inch in diameter; bunches

short, plant very vigorous and productive when grown on good soils and well cultivated.

15 cents each, \$1.25 per dozen.

FAY'S PROLIFIC. Has been cultivated for some years along side all of the best and most popular varieties, and has sustained all claims that were made for it by the originator, which were, as large as Cherry, berries much more uniform, with larger stems, and fruit less acid, and far more productive. Is fast taking the place of Cherry and La Versailles, both for home use and for market.

20 cents each, \$2. per dozen.

LA VERSAILLES. Very large, red; bunch long, of great beauty and excellent quality; one of the finest and best, and should be in every collection.

15 cents each, \$1.25 per dozen.

North Star. New. From Minnesota, and claimed to be perfectly adapted to the climate of the Northwest. Large, strong grower, productive, bunches large, long and fine in quality. In the vicinity of Springfield, Missouri, this variety is proving to be the most valuable of any yet tried, and is bearing well.

These are the claims of the North Star: Extreme hardiness, strongest grower, longest bunches, abundant fruiting, grows freely from layers or cuttings. Fruit fine flavor, sweet, rich and firm; good market berry.

1 year old plants, 20 cents each, \$2. per dozen.

RED DUTCH. An old variety; excellent and well known.

WHITE DUTCH An excellent and well-known sort.

WHITE GRAPE. Very large, yellowish white, sweet, or very mild acid; excellent quality and valuable for the table. The finest of the white sorts. Very distinct from White Dutch, having a low, spreading habit, and dark green foliage. Very productive.

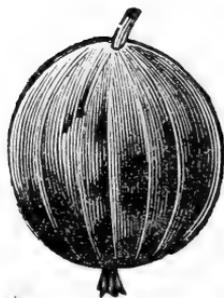
15 cents each, \$1.25 per dozen.

Prices per hundred on application.

GOOSEBERRIES.

This fruit requires the same cultivation as the currant. The surest method to prevent mildew, is to plant thickly in the rows, and mulch deeply with six or more inches of straw, tan-bark, coal ashes, etc. The price is highly remunerative, and the demand is yearly increasing. The American varieties are not subject to mildew. Where parties have, for a series of years, mulched gooseberries and currants with coal ashes, they have suffered nothing from the worm or mildew. In mulching be sure the ground is well under-drained, or it is worse than useless. Good cultivation is better than half mulching. Put it on thick. In a dry season the extra amount of fruit will doubly pay for the material used, not to speak of the saving of labor and cleanliness of the fruit.

AMERICAN VARIETIES.



DOWNING.

✓ DOWNING. Very large, handsome, pale green, and of splendid quality for both cooking and table use; bush a vigorous grower, and usually free from mildew. One of the best for both home use and market.

15 cents each, \$1.50 per dozen.

✓ HOUGHTON'S SEEDLING. Is small to medium; roundish oval; pale red, sweet, tender, very good; plants spreading; shoots tender; enormously productive.

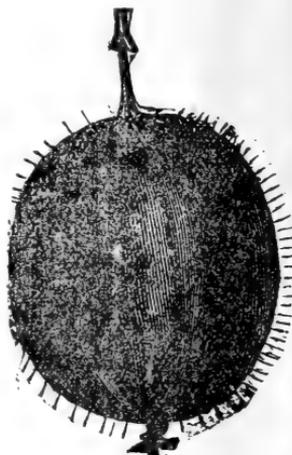
10 cents each, \$1. per doz.

✓ SMITH'S IMPROVED. Large, pale greenish yellow, skin thin, of excellent quality, being unsurpassed by any other variety for table use or cooking; bush moderately vigorous and is excessively productive.

15 cents each, \$1.50 per dozen.

✓ INDUSTRY. This is the largest, and one of the best English Sorts. Fruit very large, red, and covered with soft stickers. A good bearer and strong grower.

25 cents each, \$2.50 per dozen.



INDUSTRY.

ASPARAGUS.

This is a favorite vegetable with nearly all. Secure plants one or two years old; transplant them into permanent beds. Set them 15 inches apart each way and cover 4 inches deep. For marketing on a large scale, set 4 feet apart one way, and 1½ feet the other. This will allow the use of a cultivator to keep the weeds down. Manure plentifully each Fall, to be forked in very early in the Spring, after which sow on a good dressing of salt.

CONOVER'S COLOSSAL. A standard variety of large size, tender, and of excellent quality.

PALMETTO. An improvement on Conover's in that it yields a much heavier crop, fully as large, and of much more even and regular size. It is fit for use nearly a week before the Conover. A very valuable variety for market gardeners.

2 year old plants, 50 cents per dozen, \$2.50 per hundred.

1 year old plants, 40 cents per dozen, \$2. per hundred.

RHUBARB, OR PIE PLANT.

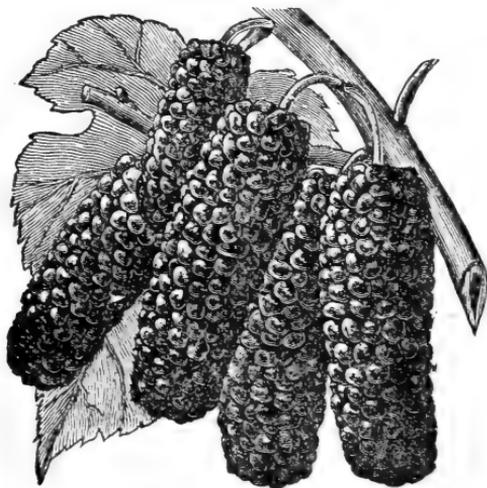
This deserves to be ranked among the best early vegetables in the garden. It affords the earliest material for pies and tarts, continues long in use, and is valuable for canning. Make the border very rich and deep.

LINNEUS. Large, early, tender and fine. The very best of all.

VICTORIA. Immensely large, broad stalks; rather coarse but good.

Strong roots, 75 cents per dozen, \$4. per hundred.

MISCELLANEOUS FRUITS.



DOWNING'S EVER-BEARING MULBERRY.

- ✓ **ALMONDS.** Hard shell. 4 to 5 feet, 50 cents each, \$5. per dozen.
- ✓ **CHESTNUTS.** Common American Sweet. 5 to 6 feet, 50 cents each, \$5. per dozen.
- ✓ **HORSE CHESTNUT.** Valuable as an ornamental tree; beautiful, round, compact head; attractive foliage and flower. 3 to 4 feet, 50 cents each.
- ✓ **MULBERRIES.** AMERICAN BLACK. Fine fruit and handsome shade tree. 30 cents each, \$3. per dozen.
- ✓ **DOWNING'S EVER-BEARING.** Very large, handsome, sweet, rich and excellent. 5 to 6 feet, 75 cents each, \$7. per dozen.
- ✓ **RUSSIAN.** Very hardy, vigorous grower; valuable for feeding silk worms, etc. Fruit of small size, varies in color from white to black. 4 to 5 feet, 25 cents each, \$2.00 per dozen.
- ✓ **WALNUTS.** AMERICAN BLACK. 25 cents each, \$2. per dozen.
AMERICAN WHITE, or, BUTTERNUT. 25 cents each, \$2. per dozen.

ORNAMENTAL DEPARTMENT.

GENERAL REMARKS.

We are just beginning to appreciate the value and importance of planting Ornamental Trees, Shrubs and Plants, Evergreen and Deciduous Hedges for lawns and yards, and screens for the protection of our orchards and gardens, and yet we have scarcely begun to realize the commercial value of such an investment to our homes. We know a keen, sagacious business man in one of our large cities, who has operated for years past in the following manner: He buys a tract of land in the suburbs of the city, cuts it up into liberal sized building lots, drives stakes for a house, and immediately plants the ground with fruit and ornamental trees, shrubs and hedges. He then employs a good man to care for them, and does not offer the lots for sale for two or three years, well knowing that the increasing value of the property will pay him good interest on the investment. When a purchaser goes to look at the property, he finds that when his house is built, he has, instead of a naked house on a bare lot, a neat and beautiful home, with its growing trees and plants, which it would have taken him years to get around him. Many of our most active business men are also men of taste, and would be glad to improve and beautify their grounds, but they are so occupied with business that they have neither the time nor disposition to find out what they want, or to lay out their grounds. Some competent man can generally be found to aid in this matter.

HOW TO PLANT.

Flower gardens and gravelled walks are beautiful, but expensive, and require constant labor to keep them in order. Grass and trees are always charming, and need but little care. In the laying out and planting of ground, have regard to economy of labor. Let there be as few walks as possible; cut your flower beds (not many) in the turf; and don't make your lawn a checker board of trees and shrubs. Mass them on the boundary lines or in groups, leaving a broad expanse of green for the eye to rest on, and the mower to sweep freely over. If an unpleasant object is in sight, conceal it by planting free-growing trees; if there is a pretty view, leave an opening. While it is not well to have large trees near the house, there should at least be one by the sunny corner, for summer shade. Plant flowering shrubs and the smaller evergreens in circles or ovals, and twice as thick as they should stand when fully grown. This will make a show at once, and in two years or more you can take out one-half, leaving the rest to fill up the space, and obtaining a supply of finely rooted plants to set somewhere else. Keep the shrubs and trees cultivated or mulched the first two seasons, and then let the turf grow about them. Mow the grass frequently, and top-dress with fine manure every Fall and Winter.

Straggling growers, like the Forsythia and *Pyrus Japonica*, should be repeatedly pinched back or clipped during the growing season, to produce a close compact form. Weigelas and Deutzias should be pruned like currants, leaving the strong young wood to flower. Altheas, and some of the Spiraeas which bloom on the new shoots, may be pruned back each year to the old wood. A very beautiful hedge can be made by intermingling different flowering shrubs and clipping, or allowing them to grow naturally.

Hardy Ornamental Flowering Shrubs.



SYRINGA, OR MOCK ORANGE (*Philadelphus*.)

ALTHEA, or, ROSE OF SHARON. A fine, large, showy shrub of the easiest cultivation, blooming freely throughout July, August and September, when scarcely any other shrub or tree is in blossom; not stopping for hot, dry weather. We offer the following and other choice named varieties, all double, unless otherwise noted.

ALTHEA, *Alba Plena*. Double white.

ALTHEA, *Anemone-Flowered*. Deep red, fine. Inner petals shorter.

ALTHEA, *Ardens*. Bluish purple.

ALTHEA, *Ball of Fire*. Large, very double, well formed flowers, beautiful violet red; one of the best.

ALTHEA, *Banner*. A fine new variety; bluish white, penciled and mottled with red.

ALMOND. Dwarf, double flowering; among the earliest and loveliest flowers of Spring; white, and pink.

BERBERRY, *Purple*. A beautiful shrub, with violet purple foliage and clusters of fine red berries.

CALA CANTHUS, *Sweet Scented Shrub*. The wood is fragrant, foliage rich, flowers of rare chocolate color, having a peculiar, pleasant odor. They blossom in June, and at intervals afterwards.

DEUTZIAS. Comparatively new, thrifty shrubs, from Japan, growing 5 to 8 feet high, and covered in early summer with a great profusion of bloom. Ellwanger & Barry say they are the most beautiful and deservedly the most popular flowering shrubs of the present time. James Vick says, "In every respect the most desirable hardy shrub in cultivation. The first time we saw this plant in flower, we thought it the prettiest shrub in existence." Flowers in clusters. The pure white varieties are much used in cemetery planting.

FORSYTHIA, *Golden Bell*. One of the best early flowering shrubs. Bloom is drooping, yellow, and appears very early in the Spring, before the leaves.

HONEYSUCKLE, *Upright or Tartarian*. One of the handsomest and most desirable shrubs in cultivation. Its delicate, sweet-scented flowers, borne very early and in great abundance, followed by bright berries, together with its neat foliage and habit of growth, make it a universal favorite. 2 to 3 feet, 50 cents each.

HYDRANGEA, *Panaculata Grandiflora*. A fine shrub, growing 8 to 10 feet high; flowers white, changing to pink, in great pyramidal panicles a foot long, and produced in great abundance in August or September. Hardy and valuable. 2 to 3 feet, 50 cents each.

LILAC, *Prince Camille De Rouen*. Very distinct, reddish flowers; panicles of large size and very abundant, blooms early in May.

LILAC, *Persian*. Small foliage, bright purple flowers.

LILAC, *White*. Very large, pure white trusses.

MOCK ORANGE, or SYRINGA, *Philadelphus*. One of the most useful and popular flowering shrubs; hardy as an oak, very vigorous, soon forming bushes 6 to 10 feet high, and covered for weeks in Spring with large, snow white flowers, many of them deliciously fragrant. 25 cents each, very large, 50 cents,

PYRUS JAPONICA, or, Red Flowering Japan Quince. One of the earliest and most showy of Spring flowering shrubs. A blaze of red bloom for weeks. Often used as an ornamental hedge, for which it is one of the very best and most suitable.

PURPLE FRINGE, or, SMOKE TREE. Much admired for its curious fringe-like flowers that cover the whole plant, giving the appearance of dense foliage. 3 to 4 feet, 50 cents each.

SNOWBALL. A popular shrub of large size; with large spherical clusters of snow white balls of blooms in June.

SPIREA, or, MEADOW SWEET. A large family of very hardy shrubs, of neat foliage and habit of growth, and of easiest culture, growing in any soil or situation. Blooming one after another, they give a variety of colors, and a profusion of beautiful flowers from earliest Spring till late in the Summer. In addition to the well known older sorts, our collection embraces several new varieties of great merit.

SPIREA, Billardi. Strong, upright grower, with long terminal spikes of rose colored flowers, which it retains all Summer.

SPIREA, Bridal Wreath Prunifolia. A strong growing, handsome shrub with pure white double flowers in May and June, foliage small, oval, glossy and of handsome dark green; very desirable.

SPIREA, Callosa Alba. Dwarf, white, almost constantly in bloom.

SPIREA, Thunbergii. A handsome, neat growing shrub with very light, airy foliage; flowers white; earliest of all.

WEIGELA. Fine hardy shrubs from Japan; a mass of bloom in early Summer.

WEIGELA, Rosea. Lovely pink, changing to rose; one of the best.

WEIGELA, Variegated Leaved. Leaves bordered white. Lovely light pink flowers in wonderful profusion.

Price of all Flowering Shrubs not specially marked, strong plants, 2 to 3 feet, 25 cents each. A collection of 12, \$2.50.

CLIMBING VINES.

AMPELOPSIS, Quinquifolia. Virginia Creeper. Our well-known woodbine. Strong grower. 25 cents each, \$2.50 per dozen.

AMPELOPSIS, Veitcheii. Japan Ivy, or Boston Ivy. Foliage three-lobed, glossy, overlapping each other and forming a dense sheet of green. When once rooted it grows rapidly, and climbs by its air roots like the English Ivy. In the fall it is a flame of crimson of all shades. Very desirable. 25 cents each, \$2.50 per dozen.

BIGNONIA, *Grandiflora*. Trumpet Flower. Leaves thick and shiny, and immense blossoms of gorgeous crimson and yellow color. 35 cents each, \$3.50 per dozen.

CLEMATIS. Large flowering kinds: *Henryi*. Pure white, very fine. *Jackmanii*. Rich, dark purple; good grower and free bloomer; one of the most popular. *Standishii*. Dark purple, fine. And other popular kinds. 75 cents each. Extra strong 3 year old plants, \$1.

CLEMATIS, *Flammula*. Virgin's Bower. Flowers in masses, small, white, and very fragrant. A very strong-growing vine, especially valuable for covering trellises or other objects. 25 cents each, \$2.50 per dozen.

HONEYSUCKLES, *Halleana*. Hall's Japan Evergreen. An almost evergreen Honeysuckle of the greatest value, being entirely hardy, and of strong, vigorous growth. The flowers are exceedingly fragrant, of pure white, changing to yellow, and are produced in profusion from May to December. One of the best. 25 cents each.

HONEYSUCKLES, *Japan Golden*. A beautiful variety, of moderate growth, with foliage exquisitely veined or netted with golden yellow lines. Flowers large and peach colored. 20 cents each, \$2. per dozen.

WISTERIA, *Sinensis*. Chinese Blue. Exceedingly rapid grower and profuse bloomer. The flowers are of a pale blue color and are borne in pendulous racemes in May and June. 25 cents each, \$2.50 per dozen.

WISTERIA, *Sinensis Alba*. Chinese White. Very similar to the Blue, except the flowers are white and remain somewhat longer. 50 cents each.

WISTERIA *MULTIJUGA*. A magnificent variety, producing immense handsome flowers, two to three feet in length. 50 cents each, \$5. per dozen.

ROSES.

HOW TO GROW.

In selecting a spot to plant your Roses, choose one where they will have full sunlight all day, if possible, and never near large trees or in shady situations, as the Rose delights in a sunny, airy position. Roses are very partial to a clay loam soil, but will do well in any ordinary soil if well enriched with well-rotted barnyard manure. In preparing the bed dig it up thoroughly to the depth of twelve or fifteen inches, as rose roots penetrate deep when they have a chance. In forming the beds do not elevate them above the level of the ground surrounding, as they will suffer less from drouth. After the plants have been set out, keep the soil loose to the depth of an inch or two by frequent stirrings. An occasional soaking with weak manure water is a great help to them.

PROTECTION.

The tender *everblooming* class may be protected during the Winter in the following manner: First cut out all of the soft or unripened wood and remove most of the leaves; then take a little soil from one side of the bush to allow it to bend over easily. Bend it over to the ground and cover the whole plant with two to four inches of earth. Over this place four to six inches of leaves, and keep in place with boards or boughs. Defer covering for Winter until cold weather fairly sets in, as moderate freezing will not injure them. Treated in this way, three Winters out of four they will go through unharmed.

HYBRID PERPETUAL ROSES.



MADAME CHARLES WOOD.

ANNA DE DIESBACH, (Glory of Paris.) Brilliant crimson, sometimes shaded with bright maroon, long, pointed buds, and large, finely formed compact flowers, very full and sweet. One of the best.

COQUETTE DES BLANCHES. One of the finest whites. Large, full and fragrant.

COQUETTE DES ALPS. A lovely pure white Rose. Very full and free in flower; delicious fragrance.

DUCHESS DE MORNAY. A charming Rose, large double flowers of the richest bright red. Extra fine.

GENERAL JACQUEMINOT. A rich, velvety crimson, changing to scarlet crimson. A magnificent Rose, equally good in the bud state or open. This is the best known of all Hybrid Perpetuals, and is without a rival in fragrance and richness of color. It is, moreover, as easy of cultivation as many of the more common varieties, and perfectly hardy.

GIANT OF BATTLES. Brilliant crimson, large, very double and sweet. Esteemed one of the finest.

GENERAL WASHINGTON. Rosy carmine, unusually glossy and brilliant, well-formed and double.

LA REINE. Beautiful, clear, bright Rose, fine, full form, very fragrant. It is well named "The Queen."

MADAME CHARLES WOOD. One of the best Roses for general planting ever introduced. The flower is extra large, full and double. Color a deep, rosy crimson, sometimes a brilliant scarlet, with maroon shading.

MAGNA CHARTA. A splendid sort. A bright, clear pink, flushed with violet crimson, and very sweet. The flower is extra large, fine form, very double and full. A free bloomer.

MADAME MASSON. Large and double, color a reddish crimson, of fine form and substance. Invaluable for bedding purposes.

MADAME PLANTIER. Pure white, large and very double. A good hardy Rose, suitable for cemetery planting.

PAUL NEYRON. The flowers are immense. It is probably the largest Rose grown, and one of the finest. Bright, shining pink, very clear and beautiful, very double, full, and finely scented.

These are strong, nursery-grown plants, 2 and 3 years old, and are much better than small, green-house plants.

50 cents each, \$4. per dozen.

MOSS ROSES.



HENRI MARTIN.

HENRI MARTIN. This is a magnificent Rose. The flowers are extra large and very double. The color is a deep, rosy carmine.

GLORY OF MOSSES. The best of all the colored Moss Roses. Flower bright pink, tinged with crimson. Large and globular.

PRINCESS ADELAIDE. A fine, bright carmine. Large and fine. Very mossy.

ELIZABETH ROWE. One of the best Moss Roses. A bright, clear pink. Very mossy.

CAROLINE DE MURINAI. Flowers white, large, double, cupped buds, heavily mossed. Extra fine.

 Strong, out-door-grown plants, 2 and three years old. 50 cents each, \$5. per dozen.

HARDY CLIMBING ROSES.



BALTIMORE BELLE.

These, for their hardiness and profusion of flowers, recommend themselves to all lovers of the beautiful. They are admirably adapted to cover arbors, walls; and any unsightly objects, and are always ornamental in any situation.

BALTIMORE BELLE. Pale blush, nearly white; very double. Flowers in large clusters, the whole plant appearing a perfect mass of bloom.

PRAIRIE QUEEN. Bright, rosy red; large, compact and globular flower; blooms in clusters; one of the best.

GEM OF THE PRAIRIES. Flowers large and double, light crimson, sometimes blotched white.

SEVEN SISTERS. Crimson, changing all shades to white.

 Strong plants, 2 and 3 year old, 40 cents each, \$3.50 per dozen.

Hardy and Ornamental Grasses.

ERIANTHUS. The hardy Pampas Grass. Growing 8 to 12 feet high, with handsome plumes; it is the most stately and showy of hardy grasses.

EULALIA JAPONICA. Grows 5 to 6 feet high, forming large clumps, covered with beautiful feathery heads or plumes, unsurpassed for winter bouquets, keeping nice for years.

RIBBON GRASS, OR STRIPED GRASS (Phalaris.) A very pretty grass, growing 1 to 2 feet high; blades striped, no two alike.

15 to 25 cents each, according to size of clumps; \$1.50 to \$2. per dozen.

EVERGREENS.

Arbor Vitæ, (American.) The finest Evergreen for hedges. It grows rapidly and soon forms a most beautiful hedge; very dense. Of course it is never adapted to turn stock, but it forms a most desirable and ornamental screen to divide the lawn from other parts of the grounds, or any other purpose.

2 feet, 40 cents each, \$4. per dozen.

Small for hedge, 12 to 18 inches, 25 cents each, \$2. per dozen, \$12.50 per hundred.

Arbor Vitæ, (Pyramidalis.) An exceedingly beautiful, bright variety, resembling the Irish Juniper in form; foliage deep green; color well retained in Winter; perfectly hardy. Should have a place in every collection.

2 feet, 50 cents each, \$5. per dozen.

Arbor Vitæ, (Siberian.) A superb variety, somewhat similar to American, with heavier and fuller foliage and more compact in habit. It holds its color during Winter, and bears trimming well; is valuable for low hedging and single specimens.

2 feet, 50 cents each, \$4. per dozen.

Box Tree. A fine, small Evergreen, with pale green leaves. Can be trained in any desirable form by shearing.

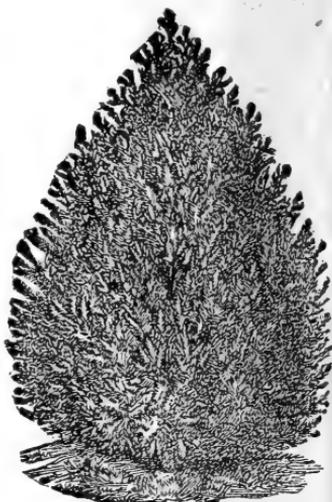
1 to 2 feet, 25 cents each, \$2. per dozen.

Small plants for hedges at reasonable prices.

Fir, (Balsam or American Silver.) A very regular, symmetrical tree, assuming the conical form even when young; leaves dark green above, silvery beneath.

Juniper, (Irish.) Erect and formal in habit; foliage deep green and very compact, making a splendid column, sometimes 15 to 20 feet high; much used in cemeteries.

Juniper, (Virginica.) Red Cedar. A well-known American tree, with deep green foliage; makes a fine ornamental hedge plant.



AMERICAN ARBOR VITÆ.



IRISH JUNIPER.

gets age it has fine, pendulous branches; it is exceedingly picturesque and beautiful. Very popular and deservedly so, and should be largely planted. One of the best Evergreens for hedges.

Spruce, (Hemlock or Weeping.) An elegant pyramidal tree with drooping branches and delicate, dark foliage. It is a beautiful lawn tree and makes a highly ornamental hedge.

Evergreens not specially marked—

25 cents per foot. Can supply trees from 1 to 5 feet.

Juniper, (Swedish.) Not quite so erect in growth as the Irish; foliage light yellowish-green. It attains a height of 10 or 15 feet; perfectly hardy.

Austrian, or Black, (Austriaca.) A remarkably robust, hardy, spreading tree; leaves long, stiff and dark green; growth rapid; valuable for this country.

Dwarf, or Mountain, (Pumila.) A low, spreading, curious species, attaining only the size of a bush; foliage similar to that of the Scotch, but livelier; green; one of the best.

Scotch, (Sylvestris.) A fine, robust, rapidly growing tree, with stout; erect shoots and silver-green foliage.

White, (Strobus.) The most ornamental of all our native Pines. Foliage light, delicate or silvery green; flourishes in the poorest soils.

Spruce, (Norway.) A lofty, elegant tree of perfect pyramidal habit, remarkably elegant and rich; as it



NORWAY SPRUCE.

DECIDUOUS TREES.

SHADE AND ORNAMENTAL.

AILANTHUS, or Tree of Heaven. A very handsome ornamental tree, having been introduced in this country from China many years ago, yet it is unknown in many parts. It is a very rapid grower, perfectly hardy in all parts, succeeding in all soils, and growing six to ten feet high with very stout stem the first summer, with magnificent leaves five to six feet long, giving a good tropical appearance. In China it is known as the Tree of Heaven, a name suggested by its majestic form and great beauty. The trees grow to a good height and bears in great profusion large panicles of bloom.

1 year old, 4 to 6 feet, 50 cents each, \$5. per dozen.

ASH, American White, (Americana.) A fine lofty tree, with handsome round head.

BEECH, Purple. A native of Germany; an elegant, vigorous tree, growing to 40 or 50 feet, or can be shorn and kept in compact ball. Foliage in spring is deep purple, and later in season changes to crimson. Very conspicuous.

2 to 3 feet, 50 cents; 3 to 5 feet, \$1. each.

BIRCH, Cut Leaf Weeping. Tall, slender, graceful, drooping branches, silvery white bark and delicately cut foliage. Conspicuous and desirable.

\$1. each, \$10. per dozen.

BIRCH, White. Handsome tree with white bark.

8 to 10 feet, 35 cents each, \$20. per hundred; 6 to 8 feet, 25 cents each, \$15. per hundred.

BOX ELDER. One of the most beautiful yard and lawn trees. Light green foliage; rapid growth, and very hardy.

6 to 8 feet, 20 cents each, \$2. per dozen, \$15. per hundred.

8 to 10 feet, 25 cents each, \$2.50 per dozen, \$20. per hundred.

CATALPA. Is a rapid growing tree of tropical appearance, flowering in July. The blossoms are large, very showy and quite fragrant; leaves very large, heart-shaped, yellowish green.

6 to 8 feet, 25 cents each, \$2.50 per dozen, \$15. per hundred.

CATALPA, Speciosa. A magnificent variety; very hardy; blooming very young; very desirable.

6 to 7 feet, 50 cents each.

ELM, American. A noble spreading and drooping tree, rapid grower.

6 to 8 feet, 25 cents each, \$2.50 per dozen, \$20. per hundred.

8 to 10 feet, 50 cents each, \$5. per dozen, \$35. per hundred.

10 to 14 feet, 75 cents each, \$7.50 per dozen, \$50. per hundred.

LINDEN, American. A rapid growing, large sized, handsome tree, with very large leaves.

6 to 8 feet, 25 cents each, \$2.50 per dozen, \$20. per hundred.

8 to 10 feet, 40 cents each, \$4. per dozen, \$30. per hundred.

10 to 12 feet, 60 cents each, \$6. per dozen, \$40. per hundred.

LOCUST. A moderately rapid growing tree; blossoms very handsome and fragrant; wood very durable and valuable.

6 feet, 25 cents each, \$2.50 per dozen.

8 to 10 feet, 35 cents each, \$3.40 per dozen.

LARCH, European, (Europæa.) An excellent, rapid growing, pyramidal tree; valuable for timber. Small branches drooping.

MAGNOLIA, Cucumber Tree, (Acuminata.) A noble, beautiful tree, with very large leaves and yellow flowers, tinted with bluish purple.

5 to 6 feet, \$1. each.

MAGNOLIA, Umbrella Tree, (Umbrella.) A small sized tree, with immense leaves and large white flowers, four to six inches in diameter.

5 to 6 feet, \$1. each.

GLAUCA. A handsome small tree; nearly evergreen, with beautiful dark green, glossy leaves and milk-white flowers in summer, possessing a wonderful and delicious fragrance, making it a favorite wherever known. Extremely hardy, growing wild as far north as Boston, and very safe to transplant.

Fine blooming plants, 2 to 3 feet, \$1. each.

MAPLE, Norway. A large, handsome tree of spreading rounded form, with broad, deep green shining leaves; very compact, stout and vigorous growth; very ornamental.

6 to 8 feet, 40 cents each, \$4. per dozen, \$30. per hundred.

8 to 10 feet, 50 cents each, \$5. per dozen, \$40. per hundred.

10 to 12 feet, 75 cents each, \$7.50 per dozen, \$60. per hundred.

MAPLE, Sugar or Rock. Of elegant, pyramidal form, stately growth, beautiful foliage, turning to brilliant colors in Fall, desirable for lawn or street.

6 to 8 feet, 30 cents each, \$3. per dozen, \$25. per hundred.

8 to 10 feet, 50 cents each, \$5. per dozen, \$40. per hundred.

10 to 12 feet, 75 cents each, \$7.50 per dozen, \$60. per hundred.

12 to 14 feet, \$1. each, \$10. per dozen, \$75. per hundred.

MAPLE, Silver. Of rapid growth, easily transplanted, and attaining large size and immediate shade, popular for street planting.

6 to 8 feet, 20 cents each, \$1.50 per dozen, \$12.50 per hundred.

8 to 10 feet, 25 cents each, \$2.50 per dozen, \$20. per hundred.

10 to 12 feet, 30 cents each, \$3. per dozen, \$25. per hundred.

Special prices on large lots.

MOUNTAIN ASH, European, (*Aucuparia*.) A fine hardy tree; head dense and regular, covered from July till Winter with large clusters of bright scarlet berries.

MOUNTAIN ASH, American, (*Americana*.) A tree of coarser growth and foliage, and larger and brighter colored berries.

MOUNTAIN ASH, Oak-Leaved, (*Quercifolia*.) A variety with large, hoary-lobed leaves; distinct and fine.

Mountain Ash, 5 to 6 feet, 50 cents each, 3 for \$1.25.

TULIP TREE, (*Liriodendron Tulipifera*.) A magnificent native tree, with broad, glossy, fiddle-shaped leaves, and beautiful, tulip-like flowers. Somewhat difficult to transplant.

5 to 6 feet, 50 cents each.

WEEPING TREES.

TEAS' WEEPING RUSSIAN MULBERRY. This fine new weeper originated in our own nursery here a few days ago. It soon attracted attention by its peculiar growth, and we began to propagate it. It has now been tested by thousands of lovers of beautiful and rare trees, in all parts of the country, and in Europe, and we believe the verdict is unanimous: "The best of all hardy Weeping Trees."

It has beautiful glossy foliage on very slender, drooping branches, forming the most graceful curves and outlines.

Being a true Russian Mulberry, it is very hardy, vigorous and long lived; transplants readily, and endures extremes of heat, cold and drouth, better than any other desirable weeper.

The trees we offer for sale have been grafted from the original tree, upon upright stems, usually 4 to 5 feet above the ground.

\$1. each, 6 for \$5., 12 for \$9. Extra large trees, \$1.50, \$2. and \$3. each.

AMERICAN WEEPING WILLOW, (*Americana Pendula*.) An American dwarf, slender branched species; grafted five or six feet high, it makes one of the most ornamental of small weeping trees.

50 cents each.

KILMARNOCK WEEPING WILLOW, (*Caprea Pendula*.) An exceedingly graceful tree, with large, glossy leaves; one of the finest of this class of trees; very hardy.

75 cents each.

WISCONSIN WEEPING WILLOW. Branches more slender than the American; perfectly hardy; one of the best.

50 cents each.

MYERS' SPRAY PUMPS.

(PATENTED.)

FOR SPRAYING TREES, ETC.

FIG. 446.



application, giving results of experiments, different formulas for all kinds of insects and trees, in the most approved and scientific manner, containing complete information, describing the different insects, the formula to use and how and when to apply it, thus establishing the fact that spraying does pay, and is necessary to insure crops.

Fig. 412, Fig. 413, and Fig. 446 are prospective illustrations showing in a limited manner how spraying outfits can be used to great advantage, in an inexpensive way.

Prof. S. A. Forbes, State Entomologist, of Illinois, in his record of experiments against the Apple or Coddling Moth, says: "That the result of once or twice spraying with Paris Green in early Spring, before the young apples had formed upon their stems, resulted in saving about 75 per cent. of the apples exposed to injury by the Coddling Moth."

Experiments at the Ohio Agricultural Experiment Station, carried on through two seasons upon two varieties of cherry trees and four varieties of plum trees, demonstrate that by the use of two or three applications of Arsenites in water in the proportion of one ounce to ten gallons of water, about

The subject of spraying fruit trees and small fruits has been so thoroughly discussed and written up in all its details and different phases in fruit growing periodicals and agricultural journals, coupled with the fact that every fruit growing State has its own Experiment Station, Agricultural Society or College from which documents and bulletins are issued free to its residents on

FIG. 412.



FIG. 413.



three-fourths of the trees liable to be injured by the plum Curculio can be saved; that a large proportion of the plum crop can be saved by the same treatment when a fair amount of fruit is set; that if an interval of a month or more occurs between the last application and the ripening, no danger may be apprehended from its use; that spraying with Arsenites is cheaper and more practical than any other known method of preventing the injuries of this insect.

FIG. 477. SHOWS PIPE AGITATOR.



DIRECTIONS FOR PRIMING BARREL SPRAY PUMP.

See that the suction pipe is screwed in tight with tongs or wrench. Ordinarily the pump will prime itself by simply working the handle rapidly. If the leathers become dry, it will be necessary to remove the nozzle and pour water into the cylinder through the hose so as to moisten them. By a little care and attention the Myers Brass-lined Spray Pump will last a great many years.

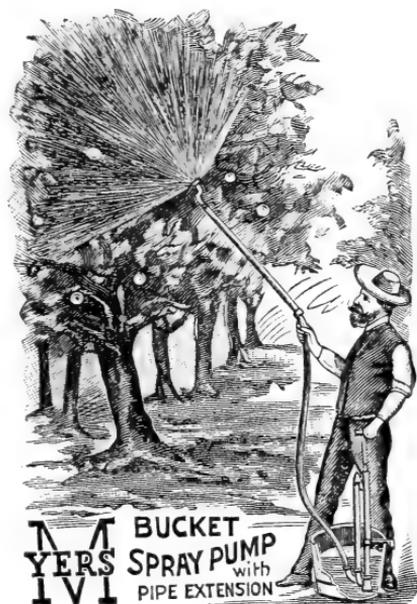
A SUGGESTION. After spraying, take pump apart, wash all parts thoroughly in clean water, then oil cylinders and saturate the leathers in oil and hang all parts up in a dry place. Do not replace leathers in pump until you want to use it.

THE MYERS' BUCKET BRASS SPRAY PUMP AND FIRE EXTINGUISHER, WITH AGITATOR.

This Spray Pump is constructed of brass, a material that is not affected by the poisonous arsenites used in the different formulas for spraying fruit trees, vines and shrubbery. The cylinder air chamber and all the working parts are brass; has rubber ball valves and is equipped with the Myers Combination Spray Nozzle, and will throw a spray as fine as mist, or coarse as required. The pump differs in construction from the old line pumps of this class and is arranged so that the heavy work is done on the down stroke of the plunger, and nothing on the up. The effect of this operation, while pumping, is to hold the pump down, and it is not necessary to use a foot rest or in any way steady the pump while in operation, except by means of a small clamp which attaches to the stave of the bucket or tub and steadies the pump, holding it in proper position.

By doing the pumping on the down stroke of the piston, and the fact that it is not necessary to steady the pump with any foot rest, makes it very easy to operate, and gives it extraordinary power. It is provided with a large air chamber, and has a ball valve at the bottom between cylinder and chamber, whereby the pressure is held uniformly in the air chamber and on the hose so that the nozzle throws a constant, continuous spray all the time, and is not affected by the movements of the plunger, and the operator is enabled to keep a constant pressure on the nozzle of from 50 to 100 pounds with very ordinary exertion. It will throw a solid stream 50 feet and is of unusual value for washing windows, etc. For spraying it is arranged so it discharges a fine jet in bottom of bucket to keep the solution thoroughly mixed and agitated, a feature peculiar to this pump only. The pump is also provided with a Sprinkler for flowers.

FIG. 478.



PRICE LIST.

Myers' Bucket Brass Spray Pump, with Agitator, complete with Hose,	
Combination Fine and Coarse Spray and Solid Stream Nozzles,	\$6.00
When fitted with Vermorel Nozzle, add to list,	.50
An 8 foot Pipe Extension is necessary to spray large Trees.—Can be attached to any of our Spray Pumps, (see Fig. 446,)	.60

WHAT CROPS TO SPRAY.

The following will be found reliable formulas for preventing leaf blight and destructive insects which infest fruit trees, vines and plants.

An easy way to keep the solution from becoming settled while spraying is to insert the spray nozzle in the tub or barrel containing same and operating the pump which will thoroughly diffuse the mixture.

APPLES. To destroy the codling moth, canker worm and apple curculio, use one pound of London Purple to 160 gallons of water. Spray the trees soon after the blossoms fall, when the apples are the size of a pea. If the best results are to be obtained, a second application should be made in a week or ten days after the first. The second application is made necessary if the first is followed in a few days by a heavy rain.

In preparing the London Purple for use, mix thoroughly in sufficient water to form a paste, then stir into a pail of water, and allow to stand over night. Strain this through a fine sieve or coarse cloth, into the distributing barrel or tank. A kerosene barrel is a convenient vessel for the purpose. Mount the barrel on a wagon or sled.

Paris Green has been used in many instances, but London Purple is preferable, being cheaper and easier to mix.

PLUMS AND CHERRIES. Plum Curculio. Use one-fourth pound of London Purple to 40 gallons of water; spray soon after the petals have fallen, and again ten days later. From experiments carried on through two seasons we reach this conclusion: First.—That three-fourths of the cherries liable to injury by the plum curculio can be saved by spraying as above. Second.—That enough of the plum crop can be saved by the same treatment to insure a good yield. Third.—That there is no danger to health from its use. Fourth.—That spraying is the cheapest and most practical method of preventing injuries of these insects.

PEAR AND QUINCE LEAF BLIGHT. The fungicide to be applied is the Bordeaux Mixture, same as is used to prevent grape rot. This is prepared as follows: Dissolve 6 pounds of sulphate of copper in 16 gallons of water; in another vessel slake 4 pounds of lime in 6 gallons of water. When the last mixture has cooled pour it into the copper solution, taking care to mix the fluids thoroughly by constant stirring. It is well to have this compound prepared some days before it is required for use. It should be well stirred before applying. *Seedlings.*—Make five applications, the first when the leaves are one-quarter grown; others at intervals of ten days until the trees are budded. *Large Trees.*—Spray five times, first when the fruit is the size of peas, and thereafter at intervals of twelve or fifteen days.

GRAPE ROT AND MILDEW. Use Bordeaux Mixture—a sure preventive. Bordeaux Mixture (A.)—Dissolve 16 pounds of sulphate of copper in 22 gallons of water; in another vessel slake 30 pounds of lime in 6 gallons of water. When the last mixture has cooled pour it slowly into the copper solution, taking care to mix the fluids thoroughly by constant stirring. It is well to have this compound prepared some days before it is required for use. It should be well stirred before applying. A solution with ingredients in the following proportions has been recommended for general use. Bordeaux Mixture (B.) Dissolve 6 pounds of sulphate of copper in 16 gallons of water, and slake 4 pounds of fresh lime in 6 gallons of water. When cool mix the solutions as described above.

TREATMENT. As a first step every precaution should be taken to remove as much of the infectious material as possible. With this object in view the old leaves and rotten berries should be carefully collected in the Fall or Winter and burned or buried. Trimmings should also be burned, as they often harbor thousands of the minute spores or reproductive bodies of the fungus. The Bordeaux Mixture has proven beyond a doubt to be the most reliable preventive to black rot. In all cases it must be remembered that these treatments are *preventatives*, and being such it is sheer folly to wait until the enemy appears before beginning the fight.

In the Spring, after the vineyard has been pruned and put in order with the plow, but before vegetation starts, spray the vines thoroughly with the Bordeaux Mixture, formula A. The object of this spraying is to destroy any spores of the fungus that may be hidden away in the crevices of the bark. About ten days before the flowers open, spray all the green parts of the vine with the Bordeaux Mixture, formula B, taking care to wet the foliage thoroughly. Spray again with the same preparation when the flowers are opening, repeating the operation every three weeks until the fruit begins to color. The necessity for beginning the treatment early cannot be too strongly urged.

CURRENTS, RASPBERRIES, STRAWBERRIES AND GOOSEBERRIES. Currant worms and the slugs and insects which infest raspberry and gooseberry bushes, and strawberry vines, may be destroyed by one ounce of powdered white hellebore mixed with two gallons of water.

PEACHES. If sprayed at all this fruit should be treated very carefully. Use Paris Green in preference to London Purple on this crop, seeing that it is kept constantly stirred; and do not make the mixture stronger than one ounce to 20 gallons of water. Spray late in the afternoon or on cloudy days, rather than in the hot sunshine.

ROSE BEETLE, (Chafer or Bug.) Use Pyrethrum or Bubach (liquid form.) A tablespoonful of the pure powder to 2 gallons of water. Apply with a force pump. Here as in all cases the liquid must be applied with great force, so that the liquid will reach all parts and touch each insect.

ROSE LEAF HOPPER. London Purple, 1 oz. to 9 gals. of water. Apply with spray pump.

“PLANET JR.” GARDEN SEED DRILLS.

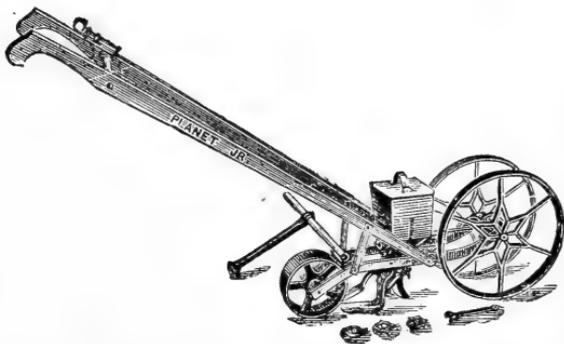


FIG. 1. THE “PLANET JR.” HILL DROPPING GARDEN DRILL FOR ROWS OR HILLS. PRICE, \$12.

This wonderful garden seed drill not only sows all garden seeds and a number of field seeds with the most perfect regularity, at any depth desired, but also drops in hills just as admirably at either 4, 6, 8, 12 or 24 inches apart. The change from hills to drills can be made in a few seconds and from drills to hills in an instant.

Hill sowing saves one-third the seed, makes hoeing and trimming easy and ensures a regular stand. An accurate index is at the top of the handle, it is adjustable while in motion, and the sowing is started and stopped instantly from the same point by the forefinger. Nothing so perfect, simple, reliable, durable and complete in the world.

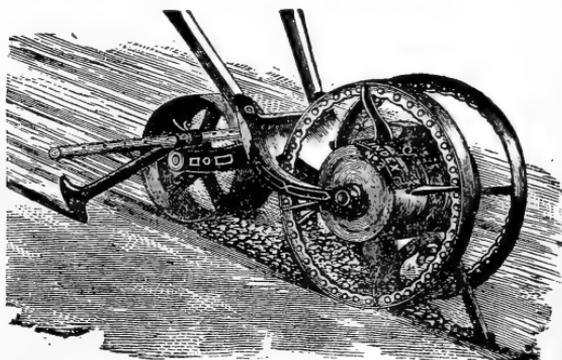


FIG. 3. THE “PLANET JR.” NO. 2 SEED DRILL. NO CULTIVATOR ATTACHMENTS. PRICE, \$9.

This has been the Standard Garden Seed-Drill of the world for a number of years, and has been recently remodelled, and offers every advantage that

seems possible for such a tool to possess, the operation being easy and simple, and the work such as to be called by the users—perfect. The index is very accurately and quickly adjusted, and the depth of sowing and the covering are both of the most regular character. It holds $2\frac{1}{2}$ quarts, sowing every variety of garden seeds with absolutely no injury to the most delicate variety. Sure to satisfy every demand, except hill dropping.

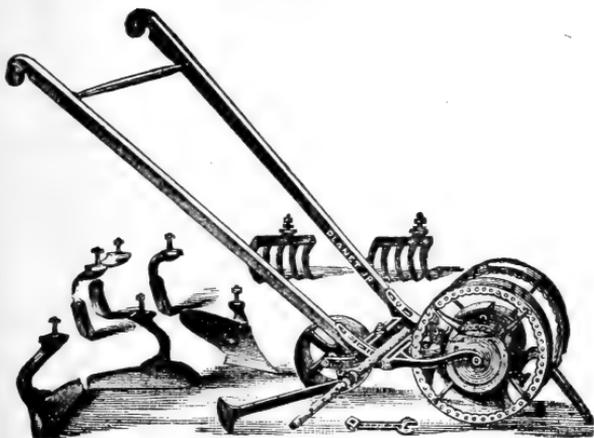


FIG. 4. THE "PLANET JR." COMBINED DRILL, WHEEL HOE, CULTIVATOR, RAKE AND PLOW. PRICE, \$12.

This is the same as No. 2 Drill, except that it is smaller, holding one quart; it sows and plants equally well, and the combination with the hoeing, plowing and cultivating attachments, makes it the most wonderful garden tool known. All the attachments shown in the cut are supplied with the machine.

The seed index can be set exactly as wanted; the names of all important seeds are there, and the adjustment can be varied, if necessary, a hair's-breadth at a time. The opening and covering are accurate from the position of the plow, causing it always to open at an even depth. There are no brushes or cams, chains or gearing, to wear out or annoy one. The marker is changed without leaving the handles, and waste of seed is prevented at the ends by wheeling around on the roller.

WHEEL HOES.

Wheel Hoes are companion implements of the seed drill, indispensable to market gardeners and nurserymen, and to all farmers who use the hand seed drill, or who grow roots for stock or vegetables for market. By using good wheel hoes, one can plant five times his usual acreage of hoed crops from drilled seed, without fear of being caught in their cultivation.

Wheel hoes should be used at the speed of a moderate walk, making a stroke at each step, except for very delicate work, when strokes but a few inches in length may be taken, averaging three or four to each step. Careful practice will enable anyone to become skilful in a short time, the chief rule being to watch the wheel or wheels only, keeping them at the proper distance from the row.

A wheel hoe should be double, or at least capable of hoeing both sides of the row at one passage. Any inequalities can be accurately followed when straddling but one row, whilst between two the tool must work the narrowest points, and therefore be quite too narrow for the wider parts; nor can a person watch two rows and work them so closely as one, even if planted accurately. Thus the double-wheel hoe saves more hand-work than the single. But there are many plants, such as onions, celery, peas, corn, etc., which grow too tall to be hoed both sides at once, and for the late tendings of such crops, when close work is not required, the "Planet Jr." Double-Wheel Hoe is arranged so that the wheels can be set close together, when it works perfectly as a single-wheel hoe. (See Fig. 11.)

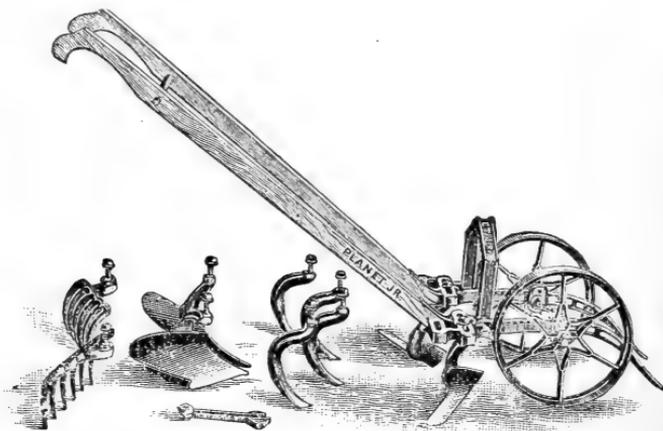


FIG. 11. THE "PLANET JR." DOUBLE-WHEEL HOE, CULTIVATOR, RAKE AND PLOW COMBINED. PRICE, \$8.

Wheel Hoes are companion implements of the seed-drill, indispensable to market gardeners and nurserymen, and to all farmers who grow roots for stock or vegetables for market. This machine will do the work of from six to ten men with ordinary hand hoes, and do it better.

The "Planet Jr." Double-Wheel Hoe is a great favorite, especially for field work. It hoes both sides of the row at once at the speed of a moderate walk.

All the blades are tempered and polished steel. The depth is regulated accurately by raising or lowering the wheels; they are ten inches high—just right for a wheel hoe—as they simply regulate the depth of work. It will hoe both sides of a row at once until plants are eighteen inches high, and finishes rows from six inches apart up to eighteen inches at one passage.

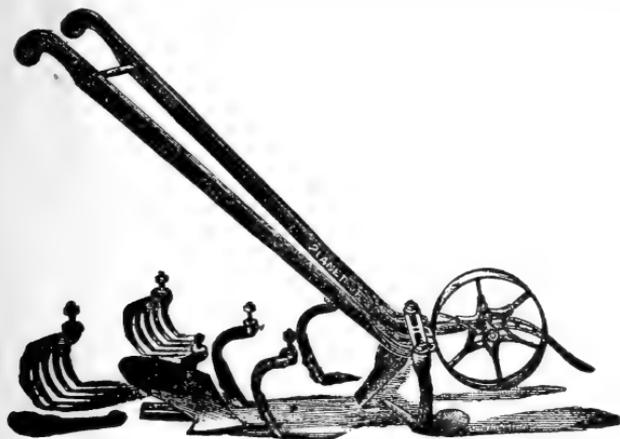


FIG. 19. THE "PLANET JR." SINGLE-WHEEL HOE, CULTIVATOR, RAKE AND PLOW COMBINED. PRICE, \$6.

This tool is capable of doing nearly all kinds of hand garden cultivation in a superior manner. The present outfit is—

1 pair of curved point hoes, 1 pair of rakes, 2 narrow cultivator teeth, 1 wide cultivator tooth, 1 large garden plow, 1 detachable leaf guard.

All the blades are steel, hardened in oil, tempered and polished. This Single-Wheel Hoe is considerably lighter than the Double, and does almost the same variety of work; the attachments are nearly identical. Owing to its lightness, it is more pleasant to some than the Double-Wheel Hoe.

Though intended chiefly to work between the rows, it can be used to hoe both sides at once, while plants are small, by placing the wheel to one side of frame.

The "Fire-Fly" Plow, Fig. 25, is a great labor-saving tool in the garden. The mold-board is tempered and polished steel.

Some owners of the "Fire-Fly" say they want no other tool in their garden; they break up their ground in the Spring, going twice in each furrow. Then they draw their furrows for manure and large seeds and cover them.

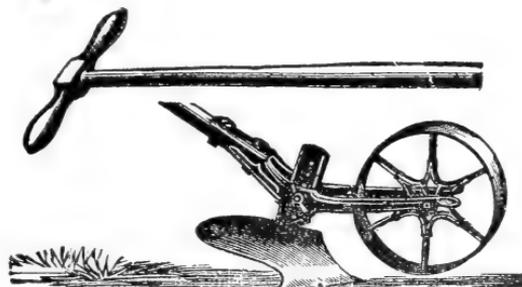


FIG. 25. THE "FIRE-FLY" PLOW. PRICE, \$2.50.

As the crops grow they plow to or from, very shallow when small, deeper as they grow larger.

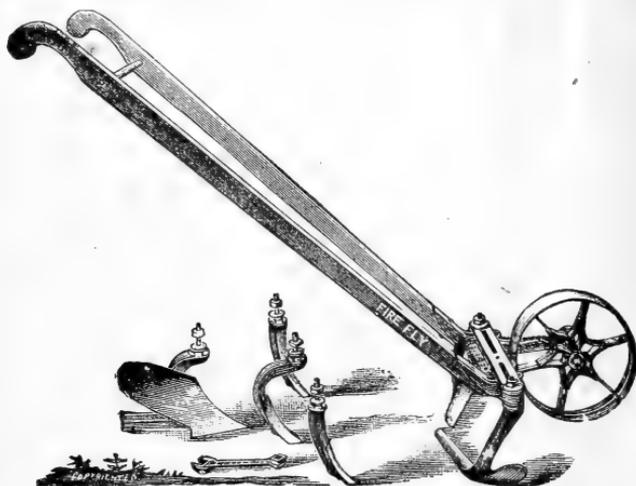


FIG. 26. THE "FIRE-FLY" SINGLE-WHEEL HOE, CULTIVATOR AND PLOW COMBINED. PRICE, \$5.

This neat and convenient machine is almost identical with the "Planet Jr." Single-Wheel Hoe. The tools supplied with it are the same pattern, and consist of one pair of curved point hoes, a set of three cultivating teeth and a large garden plow.

The blades are all hardened in oil, tempered and polished. The frame having but one main slot, all changes are easily understood and quickly made. The wheel is quickly adjusted for depth, and the frame is so constructed that the wheel can be used at one side, so as to hoe both sides of a row at once.

This is a good tool for the boys, and a pleasant one, though a thorough, strong, all-day tool for a hard working laborer.



FIG. 40. THE "PLANET JR." TWELVE TOOTH HARROW, CULTIVATOR AND PULVERIZER. PRICE, PLAIN, \$8.50. WITH WHEEL, COMPLETE, PRICE, \$12.

After thorough trials, this new tool is offered as the very best known for its intended purpose. The frame is high, and the blades are an inch wide, and of such perfect shape and symmetry as to work in the most thorough and satisfactory manner, and to offer a very unusual amount of wearing surface. The recurved throat and high frame prevent clogging; the reverse position is given to the teeth in a short time by the changing of a single bolt in each.

They may be worn off three inches and yet retain the original cutting width, and are cheaply replaced when worn. It has our lever expander and lever wheel, by which the depth and width may be changed instantly while in motion, and also a thorough pulverizer attachment, which leaves the ground in the finest condition.

NOTICE TO OUR CUSTOMERS.

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When in the city please call and examine for yourselves.

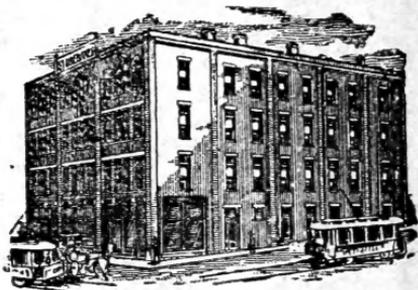
Respectfully,

SPRINGFIELD NURSERY AND FRUIT FARM ASSOCIATION.





Office in Studebaker Building,



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