

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

6261



THE

POTATO

1882.

1882.



How to Cultivate.



BEST VARIETIES FOR SEED. ILLUSTRATIONS OF THE LEADING VARIETIES.
PREMIUM CROPS AND HOW TO GROW THEM.

Centennial Collection of 500 Varieties.



SNOWFLAKE. Showing habit of growth in the hill.

B. K. BLISS & SONS,

Seed and Horticultural Warehouse,

34 Barclay Street, New-York.

P. O. Box 3530.



PRICE, TEN CENTS.

Entered, according to Act of Congress, in the year 1882, by B. K. Bliss & Sons, in the Office of the Librarian of Congress at Washington.



WHAT WE GUARANTEE.

That all seeds sold by us shall prove to be as represented, to this extent, that should they prove otherwise, we will replace them, or send other seeds to the same value. But we cannot guarantee the crop any farther than the above offer, as there are so many causes which operate unfavorably in the germination of seeds and maturity of the crop, over which we have no control. Among the causes of failure may be mentioned unfavorable weather, which is one of the most important. The soil may be in proper condition when the seed is planted, but the weather which follows may be cold and wet, which will cause the seed to rot, or it may be hot and dry, which destroys the germ, before it shows itself. The soil may also be unfavorable for the variety of seed planted. The seeds may be and are frequently destroyed by vermin of various kinds. And lastly, changes not unfrequently occur, especially among new hybridized varieties, by which frequent sports are produced which give the planter the idea that his seeds are badly mixed. Such occurrences are beyond the power of man to prevent and for which we cannot be responsible.

That all money shall reach us if sent by either Bank Draft, Money Order, Express or Registered Letter. If unable to procure money orders or currency, remittances may be made in postage stamps (of the highest denominations convenient, not exceeding 30c. stamps), care being taken to prevent their sticking to each other, or to the order. Stamps are preferable to coin, as the latter is apt to break through the envelope.

That all seeds sent out by us shall reach their destination, agreeing to replace any that may be lost in the mails.

We respectfully solicit your orders on the above very favorable conditions. Every possible care and precaution will be used by us to prevent any mistake from occurring, but should such occur, we wish to be advised at once, and they will be cheerfully rectified, as it is our aim and desire that every transaction with us shall be perfectly satisfactory.

We would also request that the above instructions may be fully complied with; also that with each and every order you will give your COMPLETE ADDRESS DISTINCTLY WRITTEN, and give shipping instructions if the order is to go otherwise than by mail.

Do not ask to have small orders sent C. O. D., as the charges for collecting the money, added to the expressage on the goods, often amounts to more than the expense of sending them by mail or express prepaid, and, to some points, more than the value of the seeds ordered. We would therefore request that each order be accompanied by a remittance, as much more satisfactory to all parties.

Thanking our many correspondents for their past favors, both in orders received and for speaking so kindly of us to their friends, and awaiting your further favors, which shall receive our best care and prompt attention.

B. K. BLISS & SONS.

THE FOLLOWING CATALOGUES WILL BE MAILED TO ALL APPLICANTS ON RECEIPT OF PRICES AFFIXED.

Regular customers, whose names are recorded on our books, will be supplied with a copy of each edition when published, without application.

Bliss's Illustrated Hand-book for the Farm and Garden.—A complete descriptive list of all the most desirable varieties of Garden, Field, and Flower Seeds, Plants, Summer Flowering Bulbs, Implements, and Horticultural Requisites of every description; illustrated by a beautiful colored plate and about 300 engravings; 150 pages; published annually. 10 cents.

Bliss's Illustrated Potato Catalogue.—Contains a list of 500 varieties of Potatoes, embracing several new and very promising varieties, with explicit directions for culture, and much other valuable information respecting this indispensable esculent. 10 cents.

Bliss's Bulb Catalogue (Illustrated).—Published September 1st, containing a choice Collection of DOUBLE AND SINGLE HYACINTHS, arranged in their several colors; TULIPS in many varieties, both double and single; POLYANTHUS NARCISSUS, CROWN IMPERIALS, JONQUILS, SNOW-DROPS, LILIES, etc. 10 cents.

Mt. Kisco Paint Works.

B. HAMMOND & CO. Mt. Kisco, N. Y.

HAMMOND'S SLUG SHOT,

A Guaranteed Exterminator of the
Potato Beetle.

It is an impalpable powder, combining fertilizing properties with poison destructive to the Potato-Bugs in the various stages of growth; at the same time the ill effects of Paris Green, or danger from having it around in quantities, are obviated. Cattle or swine are not liable to be harmed by it. It has been used with success in destroying Caterpillars, etc., from Pear and Apple Trees, on Egg-Plants, etc. Put up in barrels of 200 lbs. in bulk, \$7.50 per bbl. Packages of 5 lbs. 30 cts.; 10 lbs., 50 cts.; 15 lbs., 75 cts. Cannot be sent by mail. Prices to the trade given upon application.

B. K. BLISS & SONS,

Wholesale Agents,

New-York City.



S. B. L. E. D.

ILLUSTRATED AND DESCRIPTIVE
CATALOGUE
—OF—
POTATOES FOR SEED,

FOR SALE BY

B. K. BLISS & SONS,

At their Seed and Horticultural Warehouse,

No. 34 BARCLAY STREET,

P. O. Box 3530.

New York.

—•••—
THE POTATO.

THIS valuable and well-known esculent, now so widely cultivated, is a native of the mountainous parts of tropical America, and was taken to Spain and Italy by early adventurers in the sixteenth century, for we read of its cultivation in those countries in the year 1550. The usual size of the potato in its wild state is rarely more than an inch in diameter, and the flavor very insipid and almost unpalatable.

When first introduced into Europe it created great excitement, of a similar nature to that caused by the introduction of tobacco and coffee; for many years it was only to be found on the tables of the opulent, where it was used as a dessert either in the form of a sweetmeat or as a fruit. The first varieties grown in the United States were brought from Europe. The quality was very poor, and not a variety then in use would at the present time be deemed fit for the table. It is only within a comparatively recent period that it has found its way into both continents as a general article of food for man and beast, or has received attention from agriculturists. Many of our most practical and foremost gardeners are now directing their attention and energies to its improvement and propagation.

In the year 1844, the disease known as the rot appeared and nearly destroyed the whole crop. About this time a few persons, among others the late C. E. Goodrich, of Utica, imported a lot of the wild varieties directly from South America, and proceeded to raise seedlings by crossing with the various kinds then in use. Many thousand seedlings were then produced, but few of them were ever brought to any state of perfection.

One of the principal sorts saved was the Garnet Chili, which had a great reputation, and is the parent of many of our new sorts which are now attracting so much attention. Twenty-five years ago, a farmer who raised one hundred bushels of potatoes was looked upon as having an enormous stock; while to-day, many growers in the vicinity of our large cities raise from ten to twenty thousand bushels, without exciting any unusual attention. Within this period nearly all the numerous varieties with which we are now acquainted have been brought to notice, and every year adds its score of new seedlings to the already overgrown lists. Hundreds of millions of bushels are now raised annually in this country, and the demand is always greater than the supply—the crop of this State alone being twenty-five million bushels, raised on a little over two hundred and fifty thousand acres of land.

The uses of this tuber are numerous, aside from their principal use as an article of food. Thousands of bushels are annually manufactured into starch, and alcohol is distilled from its juices. Even sugar has been made; but with so much competition in this line, it has never proved a great success. Too much cannot be said in favor of this valuable staple, and we shall endeavor to instruct our readers in these few pages as to the methods used to increase the supply, without increasing the expense of its cultivation.

CULTIVATION.

The soil acknowledged to be the best for the potato is a rich loam, sandy, and neither too wet or too dry. A cool, moist soil will produce larger potatoes, but the danger of too much wet is so great that a warmer soil is preferable in this climate. Early potatoes reach their maturity sooner in a quick, light soil, and present a brighter and cleaner appearance, than when dug from that which is heavier. A calcareous formation generally yields a sure crop.

Old sod land, well turned under in the fall, and lightly plowed and harrowed in the Spring, will produce a sound crop, and often an astonishingly large one. Clover sod for this purpose is excellent, and furnishes a large amount of vegetable substance to the ground. When turned under in August or September it will rot by the following Spring, and only a top-dressing of some well-established fertilizer will be required to carry through the crop. Wet land produces a coarse, unpalatable article, and one of little value even as food for cattle. Barnyard manures are of little benefit to such land. Lands should never be plowed while wet and heavy; it injures the soil and does more harm than the manure can offset. Prepare the ground as carefully and thoroughly for potatoes as for any other crop. Attention in this particular well repays the farmer.

Land intended for potatoes requires but little manure, and that should be old and well rotted. By many, spreading the manure before plowing in the Spring is thought to be the best mode. At the time of planting, bone-dust, ashes, plaster, marl and like fertilizers can be used to great advantage with this crop, as they are of a dry or absorbent nature. On wet soils they are very beneficial, as they prevent disease as well as promote the growth of the tubers. On warm, dry, light land, muck compost may advantageously be used; decayed leaves are excellent. In seasons of disease among potatoes, fields where ashes have been used have suffered but little from the rot.

Potatoes are usually planted in drills or hills, the latter being the more common method in this country. Some varieties require more space than others. For drills, two and a half feet by three is ample; while, when planted in hills, three to three and a half feet is the usual distance. The latter method has some advantages, as the cultivator or horse-hoe can be used both ways of the field. Some of the earlier varieties may be planted closer without loss to the crop. Cover about four inches in light soil, and not so deep in the heavier. Cultivation should be commenced soon after the shoots appear above the ground, and weeds should be kept down with as much care as in a carrot-bed. The earth should be drawn a little towards the hill at each hoeing, that the rootlets may gain strength and nutriment from the surrounding earth. When the blossoms appear, hoeing should be discontinued, and in fact is rarely necessary, as the vines then cover the ground and discourage the growth of weeds. An excellent plan is to go over the field occasionally and remove carefully any weeds that appear in the hill, for they draw largely from the sustenance required for the developing tubers.

Many farmers still continue to plant three to five eyes to the hill. In our opinion this is a mistake, and the last few years' experience confirms our views. Potatoes cut *carefully* to a single eye, the hills, perhaps, a trifle closer, will yield a larger crop than the careless way of throwing in seed by wholesale. We all know the effects of too close a growth of carrots, turnips and such roots on the crop, and we think the same rule applies equally to potatoes. Two good eyes to the hill, with a proper proportion of the flesh to each eye, will produce a far larger crop of merchantable tubers than two whole ones; will yield from one-third to one-half more in weight—an item of no small consequence—to say nothing of the saving of nearly one-half the seed. Any intelligent farmer who is up with the times and reads the leading agricultural papers will corroborate this statement.

In order to secure an early crop, the seed must be planted as soon as the ground is in *proper* working order. This time differs in the various parts of our extended country, so that no set time can well be given. The earliest varieties can be marketed in sixty-five to seventy days from planting, thus competing successfully with Southern crops of the more common kinds. A second crop can thus be planted, as described elsewhere, allowed to thoroughly mature, and thus have good seed for another year and a sound article of food for Winter use. The yield of the first planting will give a handsome profit, for *early* potatoes always command a high price when near a city or town. The later varieties do better when planted some weeks after the early kinds; and the farmer has this advantage, he can get the former well started and cultivated before he turns his labor and attention to the latter.

A common method of forcing potatoes is to select whole, sound tubers of some early variety of medium size, placing them close together in a moderately heated bed, composed of either light loam or partially decayed leaves. This should be done several weeks—say three or four—before the time of planting. By that time the tubers will have started sufficiently to be set out. Cut the potatoes into pieces as has been directed, and use care not to injure the young shoots. Plant three inches deep, apply a little horse manure to the bottom of each hill, to afford warmth and to urge forward and nourish the young starting tubers.

The decay of the tops indicate the maturity of the roots. The later kinds often continue to grow till checked by autumn frosts. They should, however, be dug before the ground is touched by frost at night.

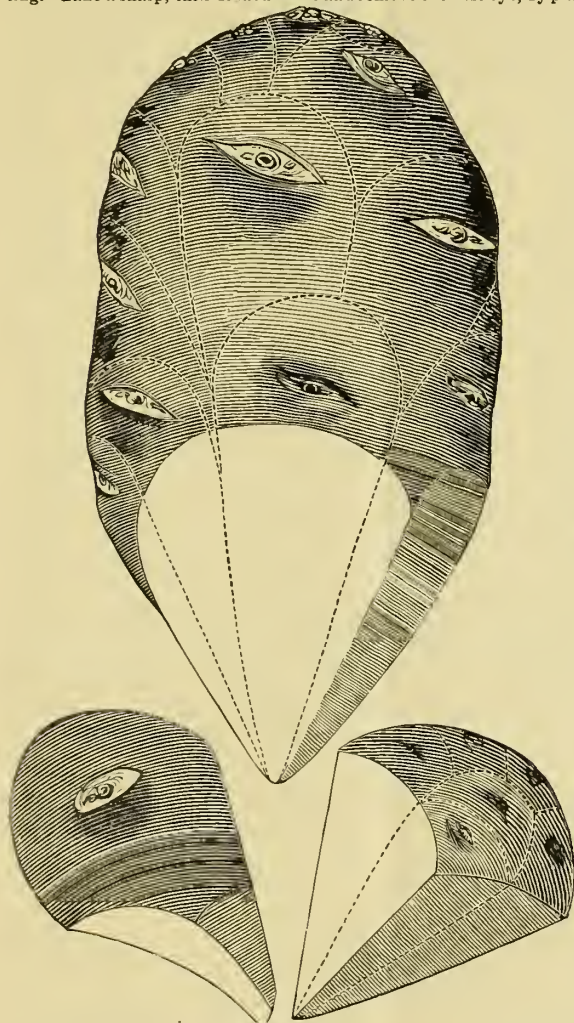
HOW TO CUT TO A SINGLE EYE.

Take any potato and hold before you, with the stem end (the place where it was joined to the vine) down. It will then be noticed that the eyes are arranged around the tuber in regular ascending rotation from the bottom to the top, similar to the thread of a corkscrew, each eye being a little above and further around the side than the one next below it. Now take the potato in the left hand, with the stem end down, keeping it in a perpendicular position throughout the entire cutting. Take a sharp, thin-bladed knife and remove the first eye, by placing the knife about equally

distant between it and the eye next in rotation above it, sloping it to the indenture left by the stem (see dotted lines in center cut), removing the flesh with it. When the first eye is removed, turn the potato around in the hand until the next eye above appears. Remove this one in the same manner, and keep on turning the potato, removing each eye as it appears in exact rotation, always sloping the knife to the stem. After three or four eyes are thus removed, the bottom part of the tuber will have a somewhat pyramidal form (see center cut). It will be noticed that each eye removed has a similar form to that represented by the cut on the left, and has its proportionate share of the flesh attached.

After the first two eyes are removed no further trouble will be found until the seed end is reached, and only a little extra care will be required to remove these closely clustered eyes. The cut on the right represents what remains of the potato after all but the small eyes are removed, while the dotted lines show how to separate each of these. It will be noticed that the base retains the same form throughout, and by sloping the knife each time, and cutting down to the apex of this inverted pyramid (which is the center

of the tuber), each eye will be supported by an equal amount of the flesh which is to start it into a strong, healthy growth. With common varieties, where seed is cheap, many will think this manner of cutting too troublesome. But if every farmer should save one-half his seed, as he easily could do (for it will only require two barrels of sets for an acre, instead of four, as is usually planted, the increase being equal), thousands of bushels would annually be saved, worth many thousands of dollars. But to those who wish to obtain a large increase from a small quantity of seed, as is necessary to those who buy the new and valuable varieties, this manner of cutting so that every eye is saved will prove invaluable.



CUTTING.

This is one of the most important subjects to be considered in the propagation of potatoes, and there is such a diversity of opinion regarding the manner and method of cutting, that many pages could be filled in giving the different experiences of the professors in this art. While we do not attempt to decide this question to the satisfaction of every one, we shall give our own views, and claim that in our method an enormous quantity of the tubers now annually planted may be thrown into the market, causing a reduction in the prices charged for this common and necessary crop. Without discussing the respective merits of planting whole potatoes, or half a dozen pieces, each piece containing three and four eyes, in a hill, we shall state, what has been proven by so many cultivators, that two good eyes are ample for one hill, and the yield of large, marketable potatoes is larger than when more are planted. With the aid of the cut and remarks on page 3, we trust our readers may be enabled to understand our method.

HOW TO RAISE FROM CUTTINGS.

For this purpose any ordinary bot-bed may be used. About the 1st of March take the potatoes to be propagated, dividing them lengthwise, and laying these pieces with the cut side down upon the soil of the hot-bed. Keep them perfectly dry until the cut part has healed over and the sprouts have commenced to start. When the sprouts reach the height of three or four inches, cut them off about half an inch above the eye, and insert the end of the cuttings thus obtained into the soil of the hot-bed. Shade them from the sun, and water carefully until they are well rooted and the leaves begin to develop. The old pieces of the potato will continue to throw up shoots to an almost incredible number, and these are all to be removed as soon as strong enough in the same manner as the first ones. In order to increase the crop still more, as soon as these cuttings have reached the height of eight inches, their tops may also be removed and planted in the same manner as the slips from the potato. As soon as the ground becomes warm and can be worked, prepare it as is usual in planting the tubers, and set out these young plants. It is best to transplant them on some cloudy day or towards evening, as the hot sun withers them and destroys many if planted in the hot part of the day. These plants will be found to grow very rapidly, and can be propagated indefinitely from cuttings of the older plants. No cuttings should be taken after the 1st of August, as they will likely be destroyed by the cold weather before the crop is matured. The immense increase of stock by the use of this method may be illustrated as follows: A pound usually contains four medium-sized potatoes, and there are from twelve to twenty eyes on each tuber. When cut and sprouted they will give, at least, five hundred plants. From each of these plants *three* cuttings may be taken, which gives a total of two thousand plants to be set in the ground. With the ordinary yield, each bill, at the lowest estimate, would give one and one-half pounds, or three thousand pounds; in all making about eighteen barrels of good, sound potatoes, or a year's supply for a large family. We do not claim that this is either profitable or advisable with the common sorts of potatoes; but with the many new and high-priced varieties which are now being disseminated at the prices of one, two, or three dollars a pound, it is almost invaluable, as for a slight expenditure a large stock may be obtained, paying to the propagator a thousand-fold. This is no new experiment, but has been practiced by the initiated for the last few years, and has ever proved a success. It is not confined to bot-beds, but many of our most prominent nurserymen have devoted whole greenhouses to this use, and we would confidently recommend it to our readers.

TWO CROPS A YEAR.

Take good, sound, early potatoes, and cut them into single eyes, as is shown in the article on cutting. Allow these pieces to dry for a day or two, and then plant as early as the ground can be worked (a slight frost will not injure the potato after being well planted). With ordinarily favorable weather the new crop of tubers will mature in from eight to ten weeks. As soon as they are ripe, dig them, and after remaining a day or two in some dry and warm place, proceed to cut them into single eyes as before. Place the pieces thus obtained into pans or boxes containing dry plaster or gypsum. This absorbs the abundant moisture, which would otherwise greatly check the growth if it did not destroy the sets entirely. Allow them to remain in the plaster for ten or twelve days, or until the eyes commence to start, when they are to be taken out and planted as before. In the latitude of New York this is only applicable to early varieties, like the famous Early Rose, or Extra Early Vermont, which are of quick growth, and early maturity; but in many parts of the South, where the growing season is long, it may be practiced indiscriminately upon all varieties. A gentleman has raised *two* crops of Early Rose, a short time since, in this vicinity,

the two crops yielding an aggregate weight of twenty-five hundred pounds. He planted his pound, cut into single eyes, early in March, and dug his first crop about the middle of May. These were then treated as above described and planted the 10th of June, and the second crop dug the 1st of September. The yield from the one pound at the first digging was fifty pounds, and the second crop of this increase was twenty-five hundred pounds, or over forty bushels. This method is within the reach of all, and there is no extra expense incurred for hot-bed sashes or any other forcing requisites.

HOW TO RAISE SEEDLINGS.

Save any well-ripened seed-balls from a good variety, and plant in early Spring, in well-drained boxes of sandy loam. Sow the seed on the surface, and sift fine soil over them to the depth of one-quarter to one-half an inch; water sparingly, and when the seedlings are three inches high, remove them from the seed box without disturbing the earth around them more than is necessary, and plant in more roomy quarters. Many successful growers, however, prefer sowing the seed in open ground, when a partially shaded spot may be selected, and the seeds may be sown in drills about ten inches apart; cover with half an inch of soil. When the plants are strong enough, transplant in rows three feet apart, two feet in the rows, and keep down the weeds until the tubers ripen. Some few strong growing varieties, will form tubers weighing from six to eight ounces the first year. As a general rule they will be about the size of a walnut. The seed we offer this season, "**Pringle's hybrid**," is far in advance of any hitherto offered, as will be seen by referring to the description on page 32. Store the tubers carefully until the next season, keeping them as cool as may be without freezing, when they may be planted in the same manner as any mature potato.

It usually takes three years to ascertain the true value of a seedling, and if a person is favored by finding one really good variety among the many seedlings, he may feel well repaid for his time and trouble. Many new varieties are raised by hybridization, which is a more difficult method, although it generally secures a greater number of good varieties. The manner of procedure is as follows: Remove all flowers excepting those you wish to hybridize, then with a pair of sharp scissors remove all the anthers from the stamens in the flowers to be impregnated, just before they commence to discharge their pollen. When the flowers are dry, shake the flower containing the stamens of the variety which you wish to cross with it, being careful to do it when they are ready to discharge their pollen. Fit a piece of fine netting over the impregnated flower, to prevent the bee and other insects from leaving the pollen of other varieties upon the exposed pistil. The covering may be removed after two or three days. Do not disturb them again until the seed-ball has ripened, when the treatment as given in the first part of this article may be applied.

Instances have been known, though rare, where one potato would produce two distinct sorts from its different buds or eyes. The White Peachblow, for example, has been found growing on the same stalk with the Jersey Peachblow. As so much interest is now excited in the growth and propagation of new seedlings, and many of the new varieties command such high prices—it behooves our farmers and amateur gardeners to avail themselves of the latest and, by actual tests, the best method of producing new varieties.

HOW TO STORE AND KEEP.

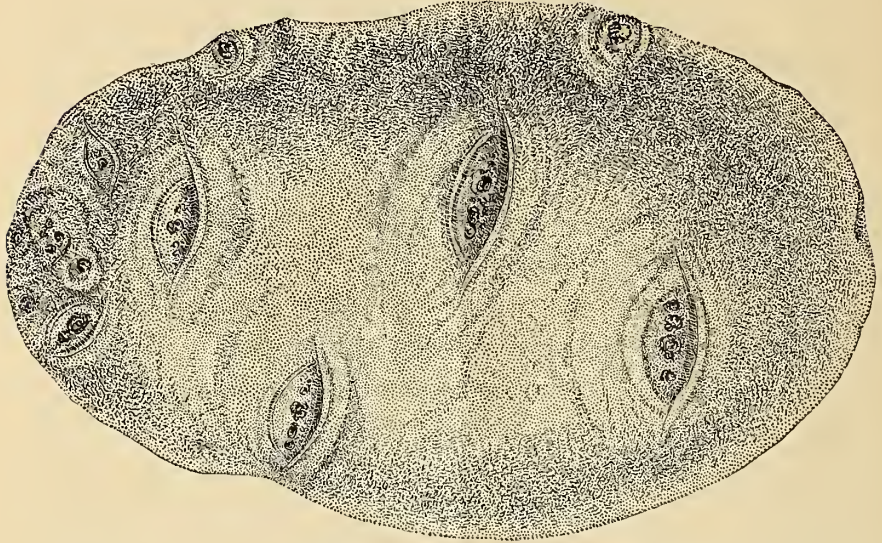
It is a matter of no small importance to the farmer to be able to keep his crop of potatoes in good condition through our long Winters, and to present them for sale, free from blemish or mildew, in the Spring. A well-kept potato brings three or four times its value in market in early Spring than the same stock will if sold in the Fall, paying an extra profit over and above the cost of storing, handling and care required.

Of the three methods of storing in general use, each has its champions. They are: storing in barrels, bins, or heaps or pits. The advantage of placing in barrels is, they can be easily handled, do not suffer from abrasion, can be readily looked over, and if *disease presents itself* it can be checked or removed.

When thousands of bushels are raised on one farm, this method cannot be followed on account of the time and expense involved. Bins are largely used by our fore-handed farmers, especially those near large cities, as the roots can at any time be reached and got ready for market. A dry, cool, well-ventilated cellar, with the light excluded, is the best place to store potatoes. It has been found very advantageous in preventing decay to sprinkle lime in the barrels or bin at the rate, say, of one pound to each barrel. It acts as an absorbent and neutralizes the earthy odors, thus directly acting as a preventive of decay to the roots.

The importance of excluding light from potatoes and keeping them as cool as possible, cannot be over-estimated as means of preserving the crop.

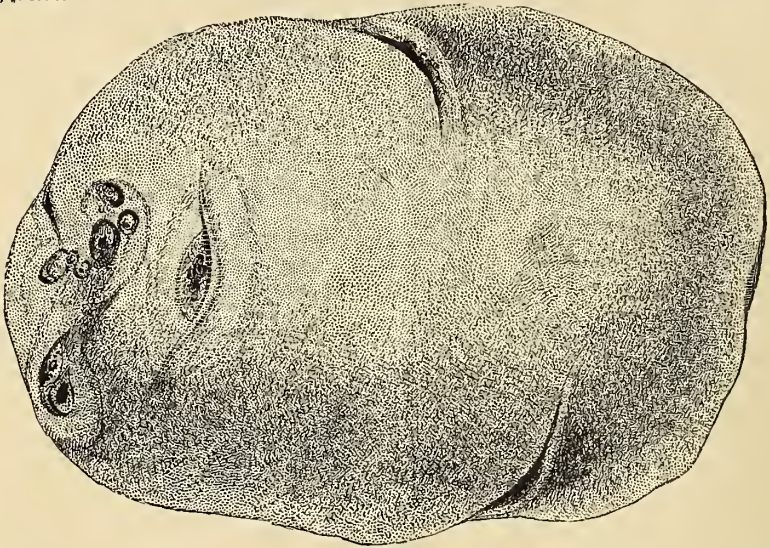
POTATOES. New Varieties of 1882.



BROWNELL'S BEST.

This new seedling, originated by E. S. Brownell in 1875, belongs to that well-marked and excellent strain of Potatoes represented by the Snowflake, Pride of America, and a few others. In appearance it differs not materially from these well-known varieties. Its color is white, shading to russet; shape oblong, somewhat flattened; eyes few and entirely smooth; flesh white, fine-grained, floury, and of the purest flavor. The tubers grow compactly in the hill, and are remarkably uniform in good medium to large size. It ripens second early, and is equally valuable as an early market as for a Winter Potato. Its yield is enormous, 16 bushels having been raised on 5 rods of ground. Taking all in all, we do not hesitate to assert that the highest perfections in shape, in size, in yield, and in quality are combined in this new variety.

Price, \$1.00 per pound; three pounds to one address, \$2.50, by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$3.00; one peck, \$5.00; half bushel, \$7.00; one bushel, \$12.00; barrel, \$25.00.



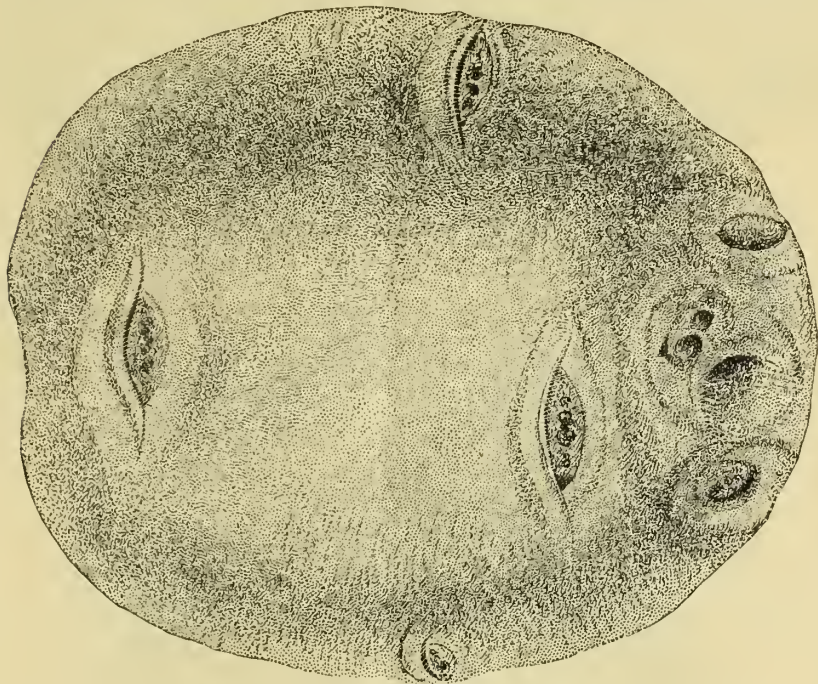
EARLY HOUSEHOLD.

A seedling raised from Pringle's Hybridized Potato-seed, selected from a large number of seedlings on account of its extreme earliness combined with excellent quality. The tubers are large, short cylindrical, flattened or indented on one side; skin and flesh white, quality first-class in every respect. It clusters compactly in the hill, and has never shown any signs of disease in foliage or tuber; ripens a few days earlier than Early Rose, and excels it in hardness as well as productiveness. It is of distinct and handsome appearance, and cannot fail to become a leading early market variety.

Price, \$1.00 per pound; three pounds, \$2.50, by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$3.00; one peck, \$5.00; half bushel, \$7.00; one bushel, \$12.00; barrel, \$25.00.

VERMONT CHAMPION.

The persevering efforts of Mr. A. Rand, of Vermont, the originator of this new variety, have already given us some of the best and most valuable Potatoes in cultivation. His aim has always been to select for parent stock varieties that have by experience proved to possess some special desirable qualities, which, in a higher degree than others, would be transmitted to their progeny. Compton's Surprise and White Peach Blow were found of superior value for this purpose, and have been largely experimented with. A great number of seedlings were produced by crossing these two varieties, and after six years' trial, this one—the Vermont Champion—was selected, not only as possessing more



Vermont Champion.

good qualities than any other, but as one of the most valuable varieties ever cultivated. It is of large size, roundish oval form, has a silvery white skin and white flesh; its flavor is pure and delicate. It is a good cropper, and keeps well. A first-class certificate was awarded to this variety by the Royal Horticultural Society of London, England.

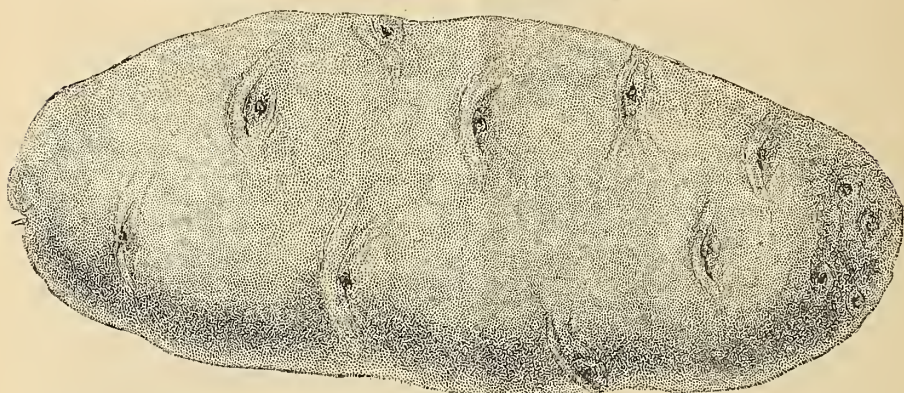
Price, \$1.00 per pound; three pounds to one address, \$2.50, by mail, post-paid. By express or freight, at the expense of the purchaser: half peck, \$3.00; one peck, \$5.00; half bushel, \$7.00; one bushel, \$12.00; bbl., \$25.00. When the *three varieties* are ordered, we make the following deductions: One pound of each, \$2.50; three pounds of each, \$6.00, by mail, post-paid.

VARIETIES OF 1881.

WHITE STAR.

This superior variety is unquestionably one of the very best in cultivation. It was extensively grown the past year by many of the largest growers in the country, and all agree that it is one of the most hardy, prolific, and best keeping varieties they have tested. All the good qualities claimed for this variety when first introduced have been fully maintained, and we can recommend it with the greatest confidence as deserving a prominent place in every collection.

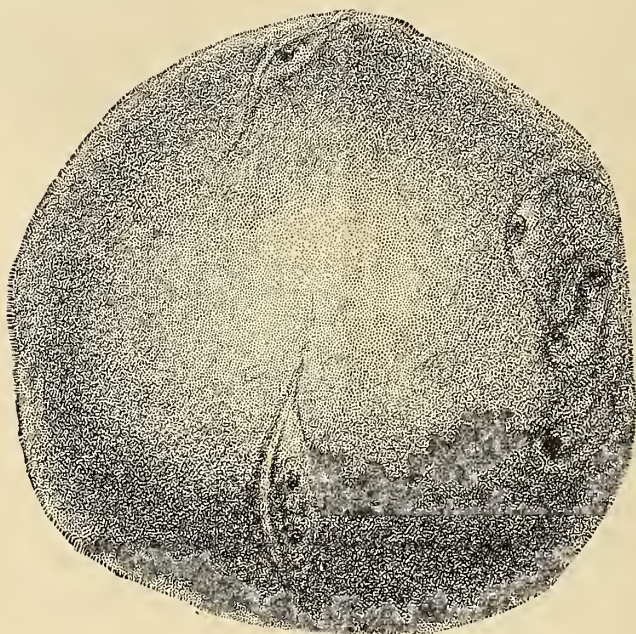
The originator reports having selected it in 1875 from a collection of seedlings, raised from seed-balls of the **Excelsior**, fertilized with pollen from the **White Peach Blow**. The foliage is dense dark green; vines strong, stocky, and vigorous, on which account it is well calculated to resist the ravages of the Colorado beetle. The tubers are oblong, large, uniform, and handsome; while in yield it has proved remarkably prolific, and so far has effectually resisted blight. It is medium early, and not the least important feature of this new potato is its excellent keeping qualities. In this respect it excels any other sort we know of. Whether baked or boiled, its cooking qualities are faultless; its



WHITE STAR.

purity of color, fine floury texture, and delicious flavor being unexcelled by any other variety. It is with great pleasure we introduce the **White Star Potato**, feeling confident that its many merits will be duly appreciated, and secure for its high rank amongst its many competitors.

Price, 50c. per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$1.00; one peck, \$1.50; half bushel, \$2.50; one bushel, \$4.00; bbl., \$9.00.



ADIRONDACK.

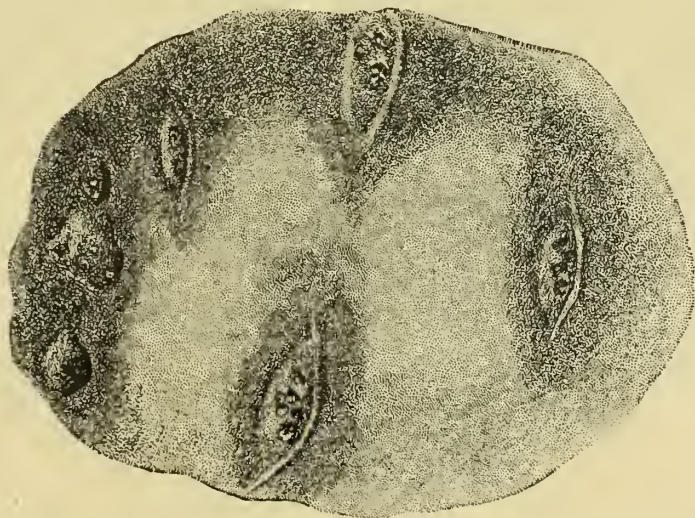
This new variety is the result of a hybridization of a favorite sort with the **White Peach Blow**, and takes precedence over that well-known standard sort on account of

several distinct and commendable features. In habit, the vines are readily distinguished from those of the **White Peach Blow**, being more upright; the foliage is bright green, and the individual leaves rather large, which imparts a vigorous and robust appearance. The roots take a strong hold on the soil, enabling it to resist the evil effects of a prolonged drouth. It may be classed as a medium or second early variety. The tubers are red-skinned, remarkably symmetrical, being almost a perfect ball, and grow more in clusters than in the parent variety. It possesses excellent table qualities, being pure white in flesh, floury, and of faultless flavor. It is an abundant cropper, while its keeping qualities have so far been perfectly satisfactory.

Price, 50c. per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser: half peck, \$1.00; one peck, \$1.50; half bushel, \$2.50; one bushel, \$4.00; bbl., \$9.00.

EXTRA EARLY PEACH BLOW.

A New Extra Early Variety.



Another season's trial has but confirmed the good opinion we expressed last spring concerning this variety. As already mentioned, it is a seedling of Early Vermont crossed with White Peach Blow, which possesses distinguishing qualities likely to rival the parent varieties in many desirable points. In habit of growth it bears a close resemblance to **Alpha**, the stalks being rather short, erect, and robust. The leaves are heavy in texture, and pointed. The tubers grow very compact in the hill; are flattish-round in form, and maintain a uniformity of size, on which account it is very desirable as a market variety. The skin is russety-white, with eyes blotched and shaded with delicate pink, similar to the Jersey Peach Blow, although in some of the tubers this is hardly recognizable, or altogether wanting. In yield, it is nearly double that of Alpha, and being almost as early, is, on this account, superior to that well-known sort. Flesh pure white, firm, fine-grained, and of excellent flavor.

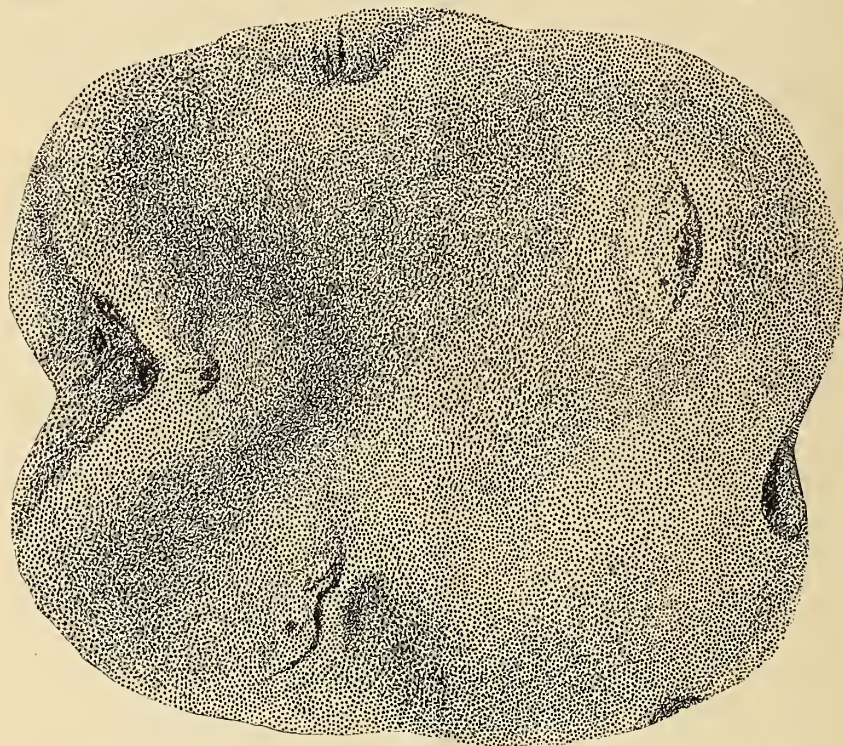
Price, 60c. per pound; three pounds to one address, \$1.50, by mail, post-paid; peck, \$1.75c.; bush., \$5.00; bbl., \$10.00.

POTATOES, Varieties of 1880.

AMERICAN MAGNUM BONUM.

Quite distinct from the English Potato of the same name.

During the past season this variety has been subjected to the most critical tests by eminent agriculturists in many sections of the country. From all quarters the report



comes that it possesses several of the most essential qualities to render it a standard sort wherever introduced. It is an early variety, maturing a few days after the Early Rose, while in productiveness it far surpasses that popular variety. The tubers are uniform in size, unusually large, of excellent table qualities, free from disease, and keep well. The raiser describes it as "a seedling of Peach Blow; vines vigorous and erect; tubers nearly round, flattened at the ends; russety-white skin; small pink eyes; flesh snow white, and, whether boiled or baked, very floury and of a pleasing nutty flavor; has yielded at the rate of 600 bushels per acre." We recommend it to our customers as worthy of a trial.

Price per peck, \$1.25; per bush., \$3.00; per bbl., \$7.00. By mail, 50 cents per lb.; 3 lbs., \$1.25.

QUEEN OF THE VALLEY.

One of the most prolific varieties in cultivation. Season medium; tubers very large, hardly any small ones; shape long, flattened, somewhat square cut at the ends;



QUEEN OF THE VALLEY.

color, deep pink at the seed end, gradually changing to almost white at the stem end; cooks mealy without falling into pieces. Leaves large, thick, and dark green. The vines are large and unusually vigorous, protecting the ground from the direct rays of the sun, and resisting disease more than most other kinds which were grown with it. Its only fault, as a table potato, might be found in its enormous size, but its immense productiveness will, no doubt, make it of great value to all who appreciate the nutritive properties of potatoes as food for live stock of all kinds.

Price \$1.25 per peck; \$3.50 per bushel; \$12.00 per bbl. 50c. per pound; three pounds, \$1.25, by mail, post-paid.

THE WHITE ELEPHANT.

This superb late variety was produced from a seed-ball of the "Garnet Chili," fertilized with pollen from the "White Peach Blow," and combines the best qualities of both varieties, viz.: *wonderful productiveness, excellent quality and flavor, power of resisting disease, and great beauty*, not to mention the fact of its being proof against decay until far into Spring. These qualities alone would recommend it, not only for field culture, but also for the private garden. From its origin it may be called a twin-brother of the "Beauty of Hebron," which it resembles in many respects, possessing many of those qualities which have rendered this latter variety so justly popular. Last season the originator planted one bushel of sixty pounds of "THE WHITE ELEPHANT" on one-eighth of an acre of ordinary soil, and therefrom harvested no fewer than fifty-seven bushels. The tubers, notwithstanding their great size, are **always solid**, and, growing closely together in the hills, the labor of digging is comparatively slight. The vines are very stout and vigorous, and have thus far resisted all manner of blight, turning yellow only at the proper season, and the potatoes ripening along with the "Late Rose."

Price per bbl., \$8.00; per bushel, \$3.50; per ½ bushel, \$2.00; per peck, \$1.25; per ½ peck, 75c.; or one pound by mail for 50c.; three pounds, \$1.25.

THE AMERICAN GIANT.

One of the largest varieties in cultivation, as well as one of the most productive.

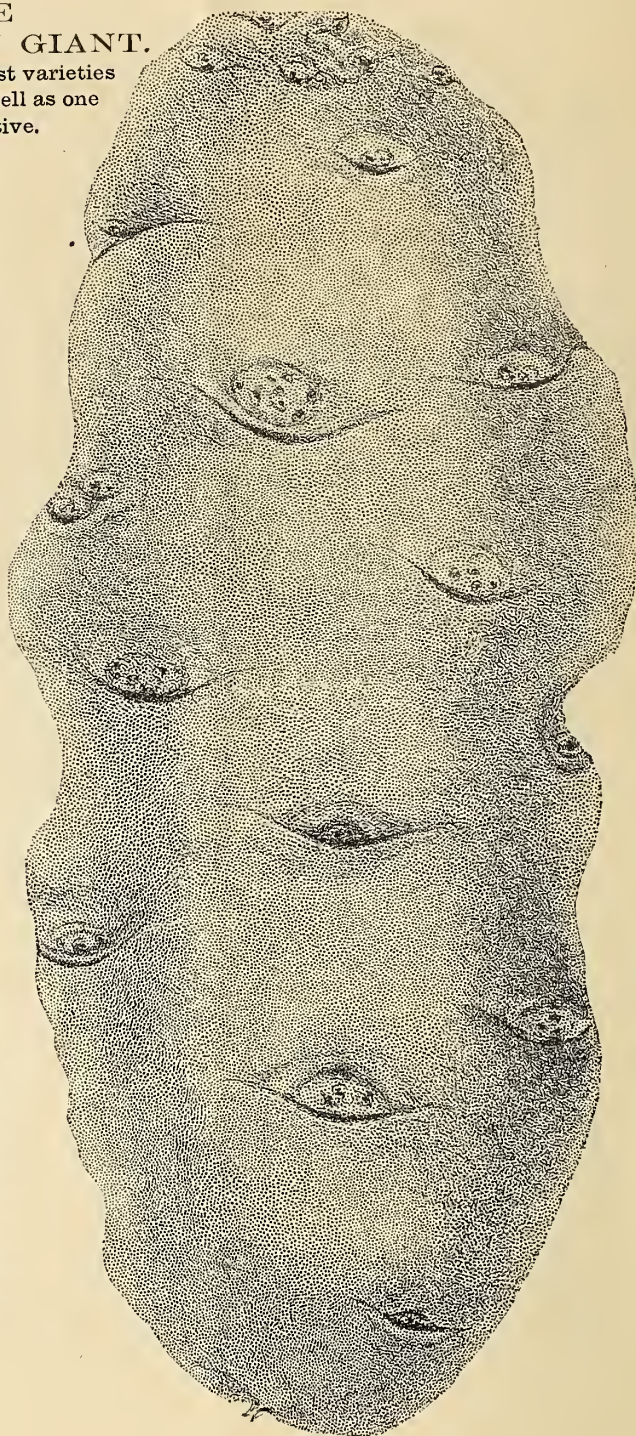
This fine variety originated in western New-York, and is thus described by the raiser: Vines vigorous and healthy, tubers of an unusually large size, grow compactly in the hills, easily dug, cooks well either by baking or boiling, of good flavor, and excellent keepers. It is a second early variety, and matures the crop about two weeks later than the Early Rose. On account of its large size it will be particularly desirable to grow as an exhibition variety.

Price, per peck, \$1.25; bush., \$3.50; bbl., \$8.00. By mail, 50 cts. per lb.; 3 lbs. \$1.25, post-paid.

A NEW SQUASH.

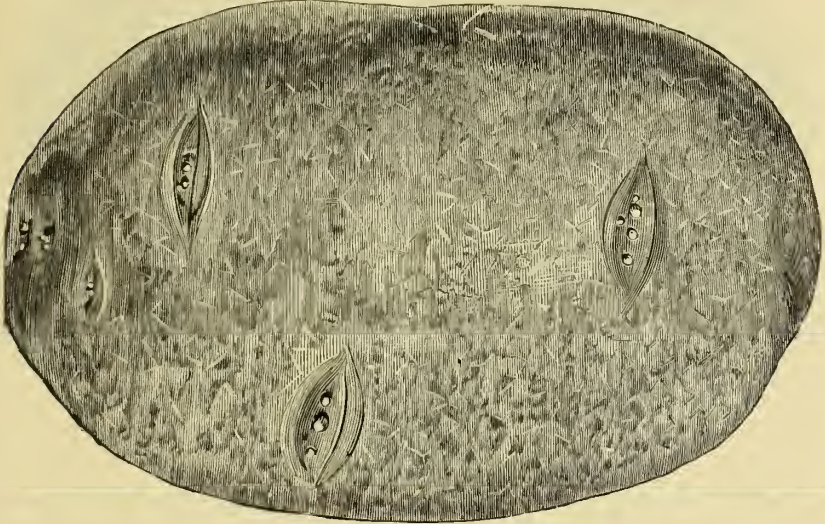
Perfect Gem.

—Excellent both as a Summer and Winter Squash, having the best properties of both classes. It is of a creamy white color, thin skinned, with fine grained, sweet, deliciously flavored flesh; a free grower, very productive, and of excellent keeping qualities. Per pkt., 15c.; oz. 30; $\frac{1}{4}$ lb., 75; lb., \$2.50.



GENERAL COLLECTION.

The following varieties, **Pride of America**, **Silver Skin**, and **Matchless**, first offered by us in the Spring of 1880, have met with general favor wherever they have been introduced. At the International Potato Exhibition in England in the Fall of 1880, they occupied a prominent place in nearly all the collections which took the highest prizes—their success in this country has been equally remarkable—and they will be largely grown the coming season.



PRIDE OF AMERICA.

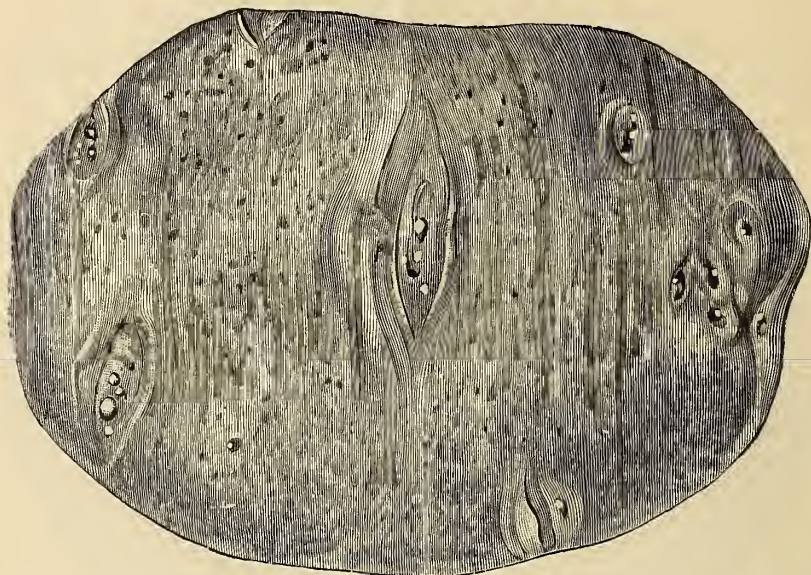
This superb variety was raised several years since by Mr. E. S. Brownell, a celebrated hybridizer in Northern Vermont, to whom we are already indebted for a number of well-known and valuable varieties. It was raised from a seed-ball of the **Eureka**, fertilized with the pollen of the **White Peach Blow**, and combines the wonderful productiveness and excellent keeping qualities of the former with all the well-known qualities of the latter.

It has been carefully tested by several of our most experienced growers in various parts of the country for the past four years, all of whom have given it their unqualified approval. In appearance it closely resembles the well-known **Snowflake**, and may be easily mistaken for that favorite variety. It ripens a few days later, and has the advantage over that variety in being adapted to a greater variety of soils, much more productive, growing to a larger size, and producing but a very few small tubers, nearly all being of a good marketable size; it is a most excellent keeper, and, so far, has shown no signs of disease. In quality it is fully equal to the **Snowflake**; flesh exceedingly fine grained and of snowy whiteness either baked or boiled, cooks through quickly and evenly, dry and floury, has no hard center or core, as a table variety is absolutely without a fault. In habit of growth the vines are of medium length, well covered with a light green, stocky foliage; the tubers grow compactly in the hill, so that the crop can be easily harvested. It is an excellent keeper, and retains all its good qualities throughout the entire season.

In the Spring of 1878 we sent about thirty of our choicest seedlings, under numbers, to Prof. Tracy, of the Mo. State Agricultural College, for trial. In his report he pronounces this variety the best of all. A gentleman of large experience, who has tested this variety, says:

"I have grown this variety for the past two seasons, and find it all that can be desired. Its smooth, handsome appearance, combined with its great cropping and remarkably fine table qualities, make it one of the most desirable varieties I have ever grown, and I have grown all the new varieties of any note introduced for the past ten years. I consider it much superior to the famous **Snowflake** in every particular. It is so far entirely healthy, grows but few small tubers, no hollow core at the center, and is one of the best keepers I ever saw. I do not hesitate to say, all things considered, that it is the best potato I ever grew—it has no fault that I can find."

Price, 50 cents per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser: one peck, \$1.00; half bushel, \$1.75; one bushel, \$3.00; bbl., \$6.00.



SILVER SKIN.

In this variety we have another wonderful production from Northern Vermont—raised in 1875 by one of our most successful cultivators—from a cross of the Early Rose and the White Peach Blow—from the same seed-ball from which the **Matchless** originated. It has been a very promising variety from the first, but wishing that its character might be fully established, we have delayed offering it until the present season. Meanwhile, it has been carefully and thoroughly tested, and we have no hesitation in giving it a place among our most desirable varieties. It resembles the **Peerless** in many respects, but is **earlier** and of **better quality**, and has so far proved more productive than that favorite variety. Vines of medium height, quite stocky, and of compact growth. Tubers medium to large, with very few small ones. Skin smooth, silvery white,—in some soils slightly russeted. Flesh of snowy whiteness, fine grain, and well-flavored; cooks through quickly, and very mealy. As a baking potato it has no equal. Its productiveness the past season was greater than any variety in our trial grounds. It is entirely free from disease,—a most excellent keeper,—and cannot fail to give satisfaction to the cultivator. As a market variety we think it will entirely supersede the **Peerless**.

Price 50 cents per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser: peck, \$1.00; half bushel, \$1.75; bushel, \$3.00; barrel, \$6.00.

MATCHLESS.

See Cut on Next Page.

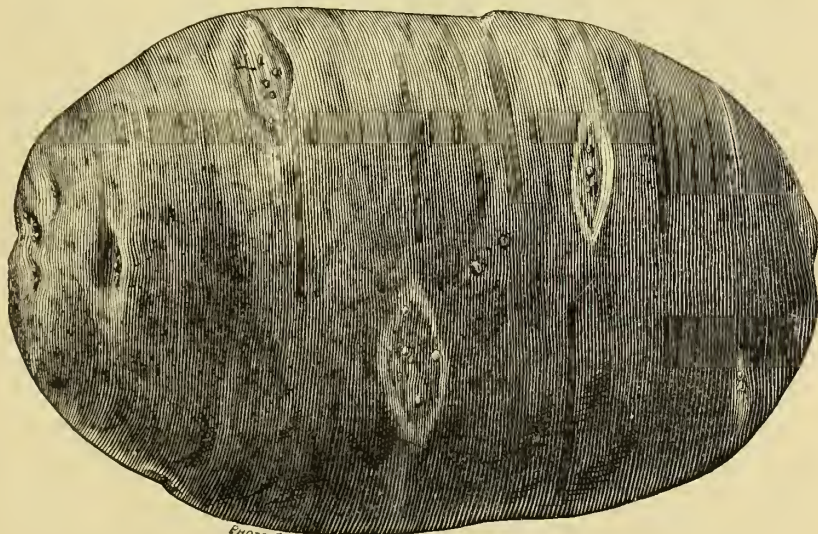
This excellent variety was raised in 1875 from a seed-ball of the Early Rose, fertilized with the White Peach Blows—since which it has been thoroughly tested in various localities, both in this country and in Europe, and has given general satisfaction. The vines are upright, of medium height, vigorous and healthy; foliage dark green. The tubers are generally round, sometimes oblong, occasionally flattened; very handsome and symmetrical in form; skin slightly russeted, pale red, except the eyes and seed end, where it is much brighter. Flesh fine grain, pure white, of excellent quality; cooks through quickly and evenly. It is a great cropper, an excellent keeper, has never yet shown any signs of disease—eyes slightly depressed. It ripens with the **Peerless**, and will be found equally valuable for the general crop. Its attractive appearance, great productiveness, and fine quality, will make it one of the most valuable varieties for the market.

Price, 50 cents per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser: one peck, \$1.00; half bushel, \$1.75; one bushel, \$3.00; bbl., \$6.00.



MATCHLESS.

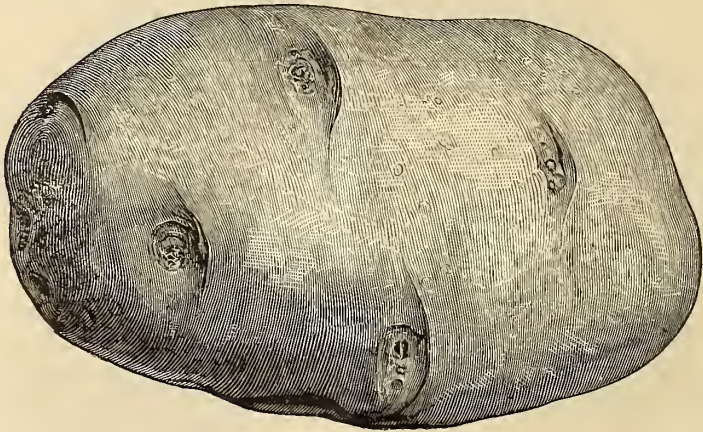
See description on page 14.



FRUITED EMB. Co. N.Y.

LATE SNOWFLAKE.

See description on page 16.



CLARK'S No. 1.

This seedling originated in New Hampshire in 1876. It is earlier than the Early Rose, and will yield from a quarter to a third more crop. It bears a close resemblance to Early Rose in appearance. It cooks mealy, is of excellent flavor, and is every way a capital variety for either the farmer or market-gardener. This potato was held in such high estimation that the entire crops of 1877 and 1878 were purchased by the Government for distribution in the South and West. 450 bushels have been raised on an acre, and 22 bushels from one peck of seed.

Price by mail, 50 cents per lb., 3 lbs. \$1.25. By express, per peck, \$1.00; bushel, \$3.00; bbl., \$6.00.

MAMMOTH PEARL.

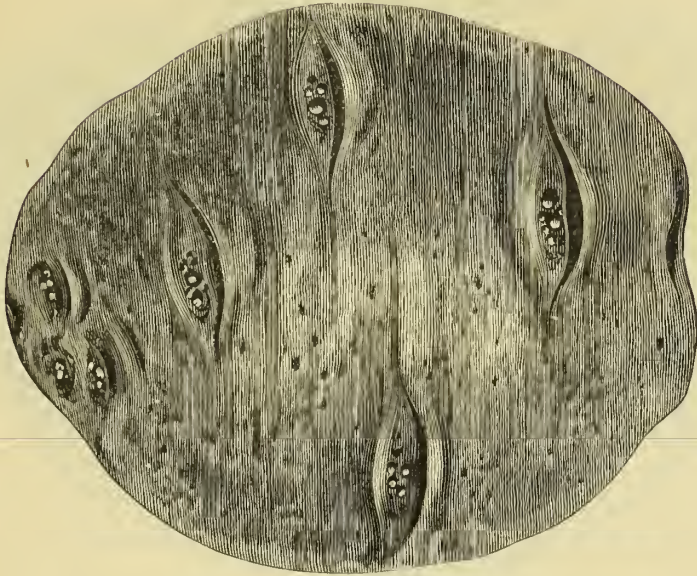
This variety, introduced last season, has proved a great favorite wherever tried. It is described as follows by the originator: "This new and wonderful variety of potatoes was originated in Ohio, and selected from over 2,500 seedlings. Sure to produce a crop in spite of the bugs. Of good table qualities, handsome in appearance, free from rot, and never hollow; skin white, and flesh whitest of any variety. For the table it cooks like a ball of flour. Eyes few and even with the surface; in shape oblong to round. It ripens in August, very productive, yielding double any ordinary variety." *By mail, 50 cts. per lb.; 3 lbs., \$1.25. By express, per peck, \$1.00; half bush., \$1.50; bush., \$3.00; bbl., \$6.00.*

LATE SNOWFLAKE.

This new and valuable variety originated in northern Vermont, and was first discovered while harvesting a field of the Early Snowflake in the summer of 1875. Several hills were noticed—evidently the product of one potato—the vines of which were quite green and in a growing state, while those of the early variety were quite dry and the crop fully matured. They continued growing for several weeks, and upon harvesting the crop the tubers were found to be exact counterparts of the Early Snowflake in form, size, color and general appearance, but much more productive. In quality they are fully equal to the Early Snowflake. They have been cultivated for the past three years and found to maintain their distinctive characteristics. We offer this variety on its own merits.

A potato combining all the good qualities of the Early Snowflake—which is the best variety introduced since the Early Rose—more productive and ripening its crop so as to be ready for use after the early crop is disposed of, cannot fail to be a valuable acquisition.

Prices by mail, 50 cts. per lb., three lbs., \$1.25. By express or otherwise, purchaser paying freight, \$1.00 per peck, \$2.50 per bush., \$5.00 per bbl.



BLISS'S TRIUMPH.

This new and beautiful variety is, without exception, the most attractive in appearance of any that we have yet offered, and will also compare favorably with the best of them in quality. It originated in the State of Connecticut, several years since, and has been faithfully tested by the originator, and found to maintain its good qualities from year to year. It was raised from a seed ball of the well-known Peerless crossed with a seedling of the Early Rose. It combines the wonderful productiveness of the Peerless, with all the good qualities of the Early Rose, is much more productive, and matures its crop at least ten days in advance of that favorite sort, before the second crop of beetles appear. In color and form it resembles the Garnet Chili, though greatly improved in form and quality. Tubers of medium size, round and uniform in shape, with but a very few small ones, eyes slightly depressed, color a beautiful light red, strongly resembling the early varieties from Bermuda; flesh fine grain and of excellent flavor. Vines about two feet in height, erect, with but a few lateral branches, covered with long, dark-green foliage.

The tubers grow compactly in the hill, are easily harvested. It is an excellent keeper; not inclined to sprout early. Its great beauty, productiveness, and fine quality, will make it one of the best market varieties in cultivation.

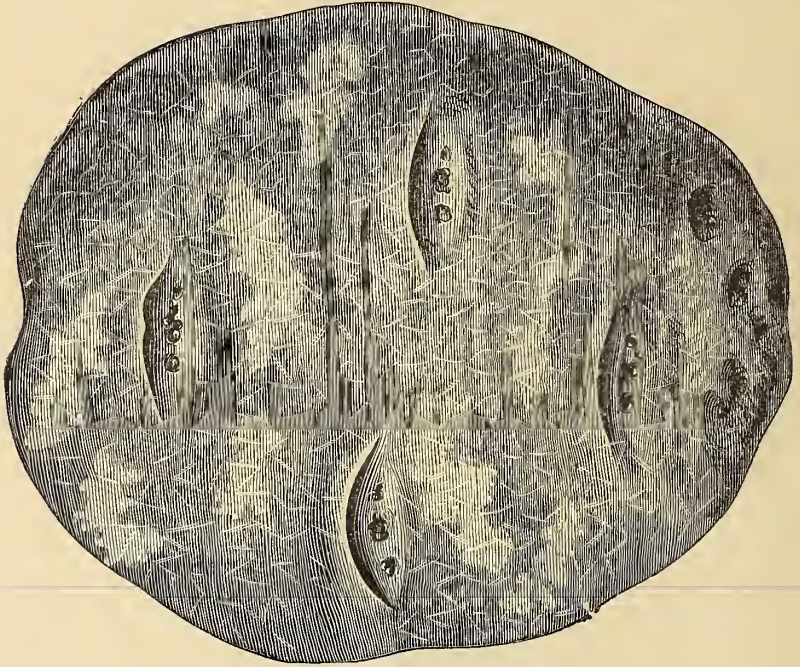
Price by mail, 50 cts. per pound; three pounds to one address, \$1.25, by mail, post-paid. At purchaser's expense, \$1.25 per peck; \$3.00 per bush.; \$7.00 per bbl.



BEAUTY OF HEBRON.

This variety was introduced in the spring of 1878. It bears a strong resemblance to the Early Rose, and is said by the originator to mature its crop a week earlier than that variety. The plants appear above ground very shortly after planting, grow rapidly, and on this account withstand better the attacks of the Colorado beetle; skin smooth, slightly tinged with pink around the eyes, but attain a pure white color during the winter; they are very productive, good keepers, of delicate flavor, and for culinary purposes can be highly recommended. It is almost invariably sound, and solid to the core, and will prove a good market variety.

Price by mail, 50 cts. per lb.; 3 lbs., \$1.25. At purchaser's expense, \$1.00 per peck; bush., \$3.00; bbl. \$6.00.



MANHATTAN.

In this variety we have what may be called an "Improved Compton's Surprise." It combines all the good qualities of that favorite variety, but is much more regular in form, and consequently more desirable as a market variety. In shape it is nearly round, sometimes a little oblong, skin dark purple, occasionally blotched with white; origin unknown; flesh white, very solid, fine grain, cooks through evenly, either in baking or boiling; dry and mealy, and of excellent quality. Size, medium to large, eyes slightly depressed, vines vigorous, a little spreading, of a dark green color; one of the most productive in cultivation. It is an excellent keeper, and can be strongly recommended as a main crop variety.

Price, 60 cents per lb.; 3 lbs., \$1.25, by mail, post-paid; by express, freight paid by the purchaser, \$1.25 per peck; \$2.50 per bushel; \$6.00 per bbl.

EARLY OHIO.

A seedling of the Early Rose, and similar in color, habit of growth, and appearance, with the exception of being a round oblong, while the former is more of an oval oblong, so that side by side it is readily distinguishable. It is several days earlier and more productive, and of very fine quality. It has given general satisfaction wherever it has been tested.

By mail, 60 cents per pound; 2 pounds \$1.00.

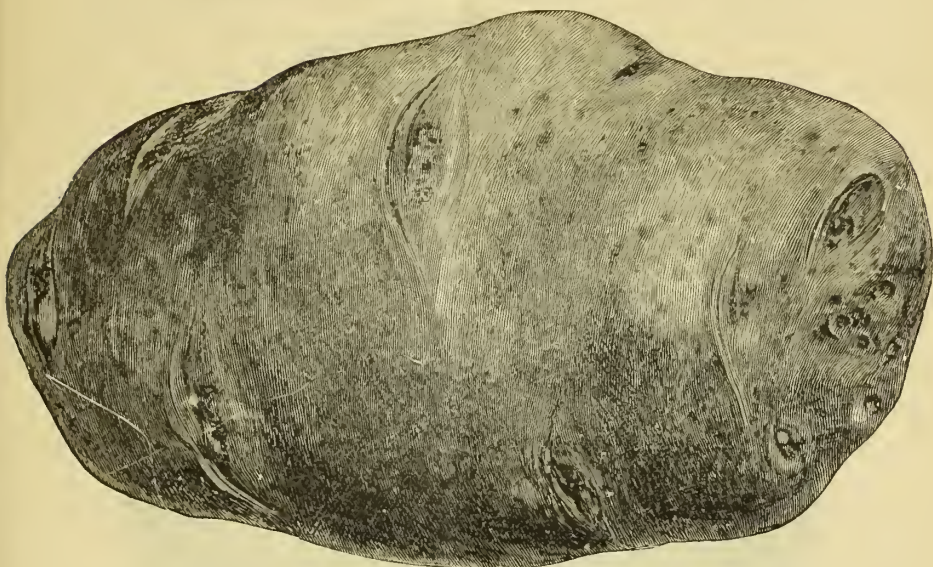
By express or freight at expense of purchaser, 1 peck \$1.00; 1 bushel \$2.50; 1 bbl. \$6.00.

BURBANK'S SEEDLING.

A seedling of the Early Rose, tubers large, long and slim, eyes few and but little depressed; flesh white, fine grain, dry and floury; cooks through readily. It is a second early variety, very productive, and superior for the market, as its size and general appearance are very much in its favor.

By mail, 60 cents per pound; 2 pounds \$1.00.

By express or freight at purchaser's expense, 1 peck \$1.00; 1 bushel \$2.50; 1 bbl. \$5.00.



LATE BEAUTY OF HEBRON.

This new late variety was first discovered in a field of the Early Beauty of Hebron, and stands in the same relation to that variety as the Late Rose and Late Snowflake do to their respective prototypes. It is remarkably productive; tubers oblong and of extra size; skin and flesh white; table properties of the highest order, and keeps well.

Price per peck, \$1.00; per bushel, \$3.00; per bbl., \$6.00. By mail, 50 cents per lb.; 3 lbs., \$1.25.

•••

DUNMORE.

This new seedling—a white skinned and white fleshed variety, which originated in Vermont, tested side by side with over forty varieties, in every requisite of a first-class potato, ranks but second to the Burbank. It is superior in its yield, size of the tubers, handsome appearance and fine floury quality either boiled or baked, of the varieties that have recently become famous. As the same potato varies on different soils, possibly on some soils the Dunmore may give greater satisfaction than the Burbank Seedling.

The past season the crop has been remarkably large. Some of the potatoes weighing two pounds each, and were perfect in shape. Its general appearance somewhat resembles the Peerless, but it surpasses that well known variety in both yield and quality.

By mail 50 cts. per lb., 3 lbs. \$1.25. By express or freight, at purchaser's expense; 1 peck, \$1.00, 1 bush \$3.00, 1 bbl. \$6.00.

•••

ST. PATRICK.

This variety has a smooth white skin, and white flesh, few and shallow eyes; in shape it is rather oblong than round, and has no core or hollow; it is also a strong and hardy grower, and, from all accounts, has withstood the rot so prevalent last season better than any other sort. It produces but few small tubers, ripens medium early, and, finally, it is enormously productive and of fine quality.

\$1.00 per peck; \$3.50 per bush.; \$7.00 per bbl. By mail, 50 cents per lb., 3 lbs. \$1.25.



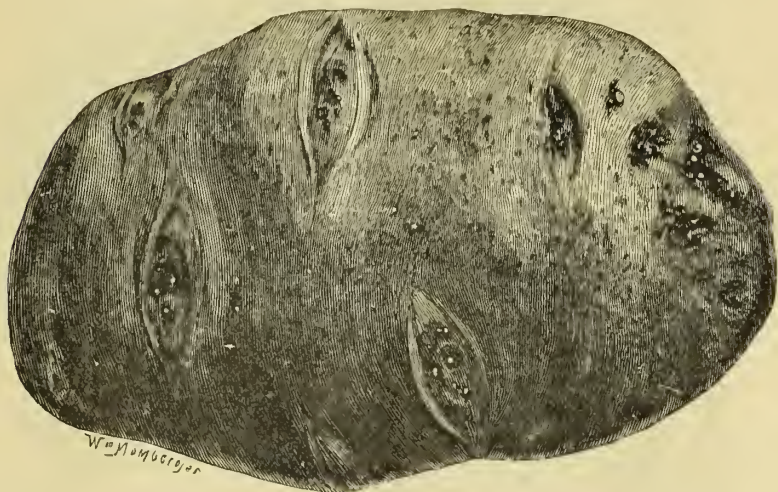
IMPROVED PEACHBLOW.

A cross between the "Jersey Peachblow" and "Excelsior," grown in 1873 by an experienced hybridizer of Vermont, who has devoted many years in experimenting with the Potato. It partakes some characteristics of each of its parents, the vines and leaves having the appearance of the "Excelsior," while its tubers resemble the "Peachblow." The form of the tubers, however, is more round and regular than that of the "Peachblow." While in quality it fully equals that old standard market sort, in productiveness it far excels the same, yielding nearly double as much per acre. Its season of ripening is somewhat earlier than that of the "Peachblow," and the growth of its tubers is more compact and closer in the hills. Taking all its points together, it may be considered a rejuvenated and reinvigorated "Peachblow," combining all the best qualities of that general favorite, in its best days, with the additional advantages of earlier ripening and compacter growth.

Price, \$0.50 per lb.; 3 lbs. for \$1.25, by mail, to one address, postpaid. By express or freight, charges to be paid by the purchaser, 1 peck, \$1.00; bush., \$3.00; bbl., \$6.00.

Bliss's Improved Long Orange Carrot.

This superior variety is the result of a careful selection, for successive years, of the best formed, largest and deepest colored roots of the Improved Long Orange Carrot, by which it has attained a perfection hitherto unknown in this useful vegetable, being larger, better flavored, and of a deeper orange color, and more sure to produce a crop. Butter makers will find this variety very useful in giving to their butter a rich, deep yellow color. We unhesitatingly pronounce it the best variety in the market, and one which will not fail to give satisfaction to the purchaser. *One ounce, 10 cents; four ounces, 30 cents; one lb., \$1.00; by mail, postpaid.*



ALPHA. (Pringle.)

The Earliest Variety in Cultivation. 1,707 lbs. (28 1-4 bush.) grown from one pound of Seed.

Raised in 1870, from seed borne on Early Rose and impregnated by pollen of Sebec. A very early variety for farm and garden culture, also for forcing under glass; fit for the table ten or fifteen days before the Early Rose. Tubers of medium size, oblong, somewhat flattened, with eyes but slightly depressed; color a clear white, with the slightest tinge of red about the eyes; flesh very white, fine grained, dry and firm, and possessed of a decided and excellent flavor; stalks short and close jointed, seldom exceeding a foot in height; leaf broad, light green and shining above; tubers clustered about the base of the stalk; quality of the highest excellence. A first-class certificate was awarded by the Royal Horticultural Society, of London, in 1874. A silver medal was also awarded by the Massachusetts Horticultural Society. It has been thoroughly tested several seasons in various sections of this country, and has given perfect satisfaction. We can recommend this with the greatest confidence as the *very best early variety in cultivation.*

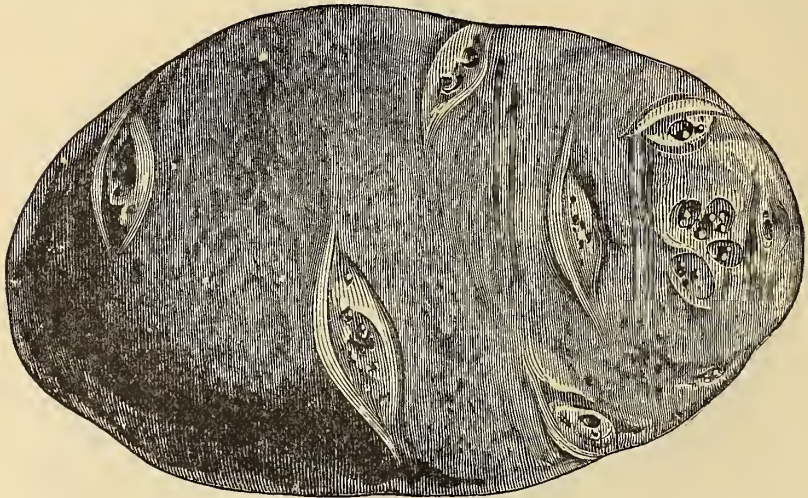
(From the Report of the Royal Horticultural Society of London.)

ALPHA—(B. K. BLISS & SONS.)—Haulm compact, about 12 inches long; ripening off very early, stem pale green, leaflets broad, flat, very pale green; tuber medium size, half round, flat; eyes large, skin smooth, very clear, pale straw-colored; flesh firm, white, of excellent quality for early use. Moderate cropper; one of the very earliest of potatoes. *First-class certificate.*

The committee who awarded the premiums offered by us last Spring, after examining the various communications received from competitors for premiums, report as follows:

"The Alpha has by many growers been declared "much the earliest of any seedlings." It was found to be "fit for use, in sixty days from the day of planting" "of excellent quality when cooked in any way, and gaining steadily in quality and yield." In this latter respect the Alpha differs from most new seedlings. But few improve after the third year, while many deteriorate rapidly. The Alpha, when first brought to notice, was below medium size, and so delicate that it was thought only suitable for garden culture. But gradually we found it increasing in size and productiveness, while it retains its earliness and excellent quality. That it will henceforth rank as the earliest Potato for the field as well as the garden, and that it yields enormous crops, even under ordinary culture, has been sufficiently proved by Mr. Clute's 1,535 pounds, grown without manure whatever." For further information respecting this variety, see the reports of the successful competitors in the following pages.

Per lb., 60 cents; 3 lbs. to one address, \$1.25, by mail, prepaid. By express or freight, charges paid by the purchaser, 1 peck, \$1.25; ½ bushel, \$1.75; 1 bushel, \$3.00; 1 barrel, \$7.00.



SNOWFLAKE. (Pringle.)

1417 lbs. (23 6-10 bushels) grown from 1 pound Seed.

This superior variety, first introduced by us in 1873, is now admitted by all to be one of the best, if not the best variety in cultivation. The superior quality claimed by the originator, when first offered, has been confirmed in every case as far as heard from.

It is one of the earliest varieties, ripening about the same time as the Early Rose. The tubers are of a good medium and uniform size; shape elongated oval, compressed, exceedingly symmetrical and remarkably uniform; eyes few, entirely flat on the base and body of the tuber, and but slightly and sharply depressed near the seed end; skin white with a russet tinge, and somewhat roughish and tessellated. Its flesh is of exceedingly fine grain, snow-white when boiled, and of a lightness and porosity almost approaching a snowflake. In quality, we do not hesitate to say nothing can surpass this new variety; its mealiness, its pure, delicate flavor, and the ovenness with which it cooks through, have never been eclipsed by any Potato. As a baking Potato, it is equally valuable, and as such is distinguished for its pure starchy texture and delicate nutty flavor. The tubers have attained the full development of their quality as soon as they are fit to dig, and do not lose it during Winter; samples kept till the first of June did not show the least deterioration. The variety has been tested on widely varying soils—sand, gravel, loam, as well as heavy clay—and has in every case given the same favorable results, and often produced a yield of from 300 to 400 bushels per acre. In every case it has proved healthy and hardy, while other varieties alongside of it failed to give satisfactory results.

We could fill quite a volume with the many letters of commendation that have been received from various growers throughout the country in favor of this fine variety, but for want of room we publish those only which have been received from the successful competitors for the prizes offered by us in 1874. These will be found in the report of the Committee in the last pages of this Catalogue.

We take pleasure in submitting the following extract of that report to our friends, which cannot but satisfy the most incredulous of its superiority.

“**The Snowflake** has received more and higher praise than has probably ever been bestowed upon any Potato. There is no dissenting voice among the whole list of reports, nearly every one of which contains ‘*It is the best Potato I ever saw.*’ Its quality and uniformity of size are especially commended. In many cases, 25 to 40 perfect Potatoes were found in every hill planted, and ‘tubers of two and three pounds each cooked readily and completely through.’ Mr. Perkins could select 1000 tubers weighing 1000 pounds from a gross product of 1304 pounds, and finds them preferable to any potato out of over a hundred varieties he grew. Mr. Salter ‘never saw so fine a potato: beautiful in color and shape, firm in texture, flesh white; luscious cooked in any way; it stands unrivalled.’ There is certainly within our knowledge no variety which combines all the essential points of a Potato in as high a degree as the Snowflake. Quality, shape, size, color, yield, are all that can be desired, and it is difficult to perceive in what direction further improvement can be obtained.”

By mail post-paid, per pound, 60 cents; three pounds, \$1.25. By express or freight, charges paid by the purchaser, 1 peck, \$1.00; ½ bushel, \$1.25; 1 bushel, \$2.00; 1 barrel, \$4.00.



Mr. Burnett's Crop of Snowflakes from One Pound of Seed.

SKANEATELES, N. Y., September 27, 1875.

Messrs. B. K. BLISS & SONS:—Accompanying this please find Stereoscopic view of the **Snowflake Potato** as grown in my garden the past Summer. It exhibits the product of one pound of seed purchased of you last Spring. The earth was carefully removed, leaving each potato attached to the root *exactly as it grew*. They were grown in good garden soil, without extra manure, and had the same cultivation as the other potatoes. No one could have been more surprised than I at the wonderful production. I had them on exhibition all one day, and a large number of farmers and amateur gardeners called to see them. For size and quantity all admitted they had never seen its equal. At the nearest end of the row, as shown in the picture, the yield was affected by a shade tree, but at the other end they were very large and in one solid mass—in fact, there was no room for a jack-knife between them. It makes quite a pretty picture, with rose bushes, geraniums and tuberose on the left and my boy "Frank" and the grapevines for a background. I have created no little excitement by exhibiting the Snowflakes at our Town Fair.

Yours respectfully,

JOSEPH H. BURNETT.

A Trial of the Snowflake in June.

In order to show the wonderful keeping properties of the Snowflake Potato, we annex a letter from the well-known horticulturist, Chas. Downig, Esq., to whom a sample grown in 1874, was sent in June for trial.

NEWBURGH, June 28, '75.

Messrs. B. K. BLISS & SONS—*Dear Sirs*: The box of potatoes was received in due time. The quality is equal and I think superior to any potato I ever ate so late in the season, and being of good size and so smooth and regular in form, it will be an acquisition if the production is sufficiently good.

Please accept my best thanks for your kindness, and for the opportunity to test them.

Very respectfully,

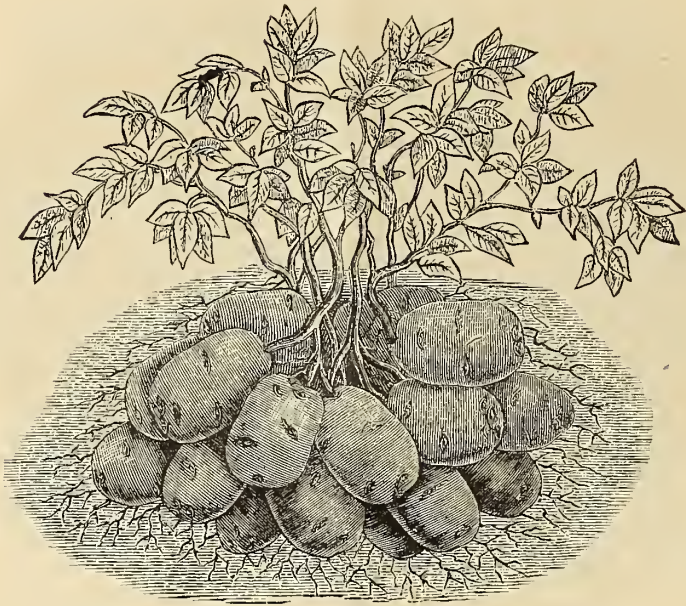
CHAS. DOWNING.

From Nash & Crook, proprietors of the well-known and popular restaurant in the *Times* building, opposite the new post-office on Park Row:

NEW YORK, July 1, 1875.

Messrs. B. K. BLISS & SONS:—We have been using the Snowflake potatoes, supplied by you in our restaurant for the past month, and find them superior in every respect to the Bermuda or any other early variety in the market. They cook dry and mealy, and are of excellent quality; and on account of the eyes being so nearly even with the surface, there is but little or no waste in peeling. They give general satisfaction to our customers. We have no hesitation in pronouncing them the best potato we ever used in our business at this time of the year.

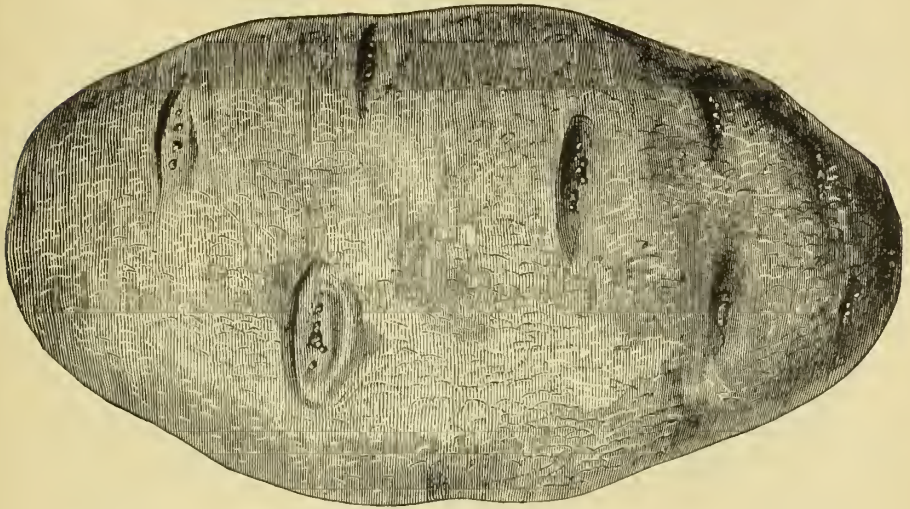
NASH & CROOK.



ALPHA.—The Earliest Variety known. Page 21.



SNOWFLAKE.—Showing Habit of growth in Hill.



EXTRA EARLY VERMONT.

The superior merits of this variety, first sent out by us in the Spring of 1872, may now be considered as fully established. It has been largely cultivated over every section of the country, the past nine years, and fully sustains the high character given it by the committee for awarding the premium offered by us in 1873, in the following statement, after examining the reports of the various competitors:

"**The Early Vermont**, as proved by the numerous reports before us, more than sustained its previous reputation. *Nearly all the competitors declare it from one to two weeks earlier than the Early Rose, and many even more.* Its uniform and large size is recognized by every one. Mr. McLeod says: 'There are more than 100 in the amount I raised that would weigh from one to two pounds each;' and Mr. Salter raised one tuber that weighed **THREE POUNDS TWELVE OUNCES.** Its superior cooking and eating qualities are unanimously commended, as well as its compact growth in the hill and its freedom from disease, and with the thousands of cultivators who have grown it alongside the Early Rose, there seems to be no doubt left that in *quality, hardiness, earliness and yield, it far surpasses that celebrated variety.*"

A first-class certificate was awarded this variety by the Royal Horticultural Society of London, 1873.

Caution.—In consequence of the great similarity between the **Extra Early Vermont** and the **Early Rose**, many of the latter will doubtless be offered by unprincipled persons as the **Early Vermont.** To avoid imposition, we caution purchasers to beware of itinerant peddlers, and purchase their stock of reliable parties only. We employ no peddlers or agents. Address all orders directly to our house.

PRICE.—By mail, postpaid, one pound, 50 cents; three pounds, \$1.25. By express or freight, charges paid by purchaser, 1 peck, \$0.75; $\frac{1}{2}$ bushel, \$1.50; 1 bushel, \$2.50; 1 barrel, \$5.00.



BLUNT'S WHITE PROLIFIC FIELD CORN.

This is an eight-rowed white flint corn, with short, well-shaped ears, and small cobs. The stalks bear from 3 to 8 ears; the ears are uniform in size, from end to end, averaging 8 to 9 inches in length, and the kernels are hard, well-shaped, and compactly placed on the cob. Like other flint varieties it matures early. Mr. Henry Stewart, one of the editors of the *American Agriculturist*, says that it yielded at the rate of 150 bushels per acre, on an experimental plot, at his farm in New Jersey. In the *Country Gentleman*, Mr. Blunt says, "The average number of ears to the stalk is six good sized ears, and fourteen the largest number on any one stalk. I selected 100 stalks that made a little over three bushels of shelled corn." *Prices by mail, per pkt., 10 cts.; 1 lb., 30 cts.; 4 lbs., \$1.00. By freight or express, per peck, \$1.00; half bush., \$1.75; 1 bush., \$3.00; 2 bush., \$5.50.*



POTATOES—EXTRA EARLY VERMONT.—Showing Habit of growth in the Hill.

STANDARD VARIETIES.

Three pounds of either of the following varieties will be mailed, post-paid, to any address in the United States, upon receipt of \$1.25, or one pound for 50 cents.

Not less than one pound, or more than one variety in one package, will be mailed.

Early Rose.—This was the first of Mr. Bresee's Seedlings, offered by us in January, 1868, and has now become the standard variety for earliness, quality and productiveness. *Per peck, 75 cents; bush., \$2.50; bbl., \$5.00.*

Early Goodrich.—Early, large; white skin, smooth eyes, white flesh, first quality, perfectly sound, solid to core, keeps well. *Per peck, 75 cents; bush., \$2.00; bbl., \$5.00.*

Climax.—Early; uniformly large; long, cylindrical; skin white; eyes sharp, shallow; flesh white and solid. This has been the most prolific early variety during the past season, and has proved hardy and healthy. *Per peck, 75 cents; bush., \$2.00; bbl., \$5.00.*

Late Rose.—This variety, first offered by us in the Fall of 1871, has been largely cultivated in various parts of the country, and has given universal satisfaction. It ripens two or three weeks later than the Early Rose, and has proved to be much more productive, hardier, healthier, and a better keeper, retaining its good quality till new potatoes come in. *Per peck, 75 cents; bush., \$2.50; bbl., \$5.00.*

Peerless (Bresee's No. 6).—Skin dull white, occasionally russeted; eyes shallow; oblong; flesh white, mealy, grows to a large size, often weighing from one and a half to two pounds, and enormously productive, frequently producing from 100 to 150 barrels to the acre. Its great beauty, superior quality, and enormous productiveness place it among the best varieties for general culture. *Per peck, 75 cents; bush., \$2.50; bbl., \$5.00.*

White Peach Blow.—A seedling of the old Peach Blow. Very late; medium to large; round; skin white, with bright pink eyes; flesh white; cooks very dry and mealy. This variety has for years been the principal market potato in New-York, and has proved a remunerative crop to the producers. *Per peck, 75 cents; bush., \$2.75; bbl., \$5.50.*

Any other varieties not in our list will be furnished at lowest market prices.

THE GREAT CENTENNIAL EXHIBIT

OF

500 Named Varieties of Potatoes.

The Largest Collection of Potatoes in the World, for which was Awarded

THE GRAND CENTENNIAL PRIZE MEDAL AND DIPLOMA !

Acme.	Cascoe.	Early Ohio.
Adirondaek.	Cayuga.	“ Peachblow.
Agawan.	Central City.	“ Pearson.
Alaska Blue.	Centennial.	“ Pinkeye.
Alexandra.	Charlotte.	“ Prince.
Alpha.	Chenery.	“ Purple.
Amazon.	Chili No. II.	“ Queen.
American Breadfruit.	Clinax.	“ Racehorse.
Anderson.	Cluster.	“ Rose.
Andes.	Colebrook.	“ Russet.
Angola.	Collum's Seedling.	“ Samaritan.
Armonk.	Columbus.	“ Scotch Cottage.
Ashleaf Fluke.	Colorado.	“ Shaw.
Ashleaf Kidney.	Colorado I.	“ Snowhall.
Ashtop Fluke.	Colorado II.	“ Sovereign.
Badger.	Compton.	“ Stevens.
Baldwin.	Compton's Surprise.	“ Victor.
Banks.	Con.	“ Wendell.
Beauty.	Concord.	“ White.
Beauty of Hebron.	Conn. Blue.	“ York.
Bellaire.	Conover.	East Branch.
Ben. Merritt.	Cornell's Kid.	Eclipse.
Berkshire.	Cowhorn.	Egg.
Black Diamond.	Cracker.	Elder.
Black Mercer.	Cullock.	Empire.
Black Prince.	Cuzco.	Empire State.
Bliss Triumph.	Dagger.	Eng. Rose.
Blue Kidney.	Davenport Seedling.	Eureka.
Blue Western.	Davis Seedling.	Excelsior.
Blush.	Delmahoy.	Extra Early Vermont.
Bradford Seedling.	Dickinson's Saybrook.	Early Rose Seedling.
Breakfast.	Dover.	“ Ohio.
Bresee's Prolific.	Dover Seedling.	“ White.
Brown.	Dr. Bretonneau.	Fancy Red.
Brownell's Beauty.	Dr. White.	Field crop.
Brownell's Success.	Duke of Cumberland.	Findlay.
Brownell's Superior.	Dunmore.	Fisher.
Bucyrus.	Dykeman.	Fluke.
Bulkeley's Seedling.	Early Blue.	Forest Rose.
Burbank.	“ Cottage.	Forfarshire Red.
Busam's Early.	“ Don.	Foster's Late Rose.
Busam's Late Prime.	“ Durham.	Fox Seedling.
Calico.	“ Golden.	Freeman.
California.	“ Goodrich.	Fremont.
California (purple).	“ Handsworth.	French.
California Mercer.	“ Indiana.	Galva.
Callao.	“ June.	Gardner.
Campbell's Late Rose.	“ Kidney.	Garnet Chili.
Carpenter.	“ Lilac.	Gem.
Carter.	“ Manly.	Gen. Grant.
Carter's Early Forcing.	“ Mohawk.	Genesee Co. King.

German Russet	Manhattan.	Prairie Flower.
Giant.	Mansfield.	President.
Gilman.	Marchioness of Lorne.	Prince Arthur.
Gleason.	Massachusetts White.	Prince of Wales.
Globe.	Mammoth Pearl.	Purple Blush.
Golden Gem.	Massasoit.	" Mercer.
Granite State.	Matchless.	" Peerless.
Gray Russet.	Merino.	Quadroon.
Great Britain.	Methodist.	Queen of the Earlies.
Great Western.	Mexican.	Queen of the West.
Greenfield.	Michigan Red.	Quinby's Seedling.
Guernsey.	Miller.	Rand's New Peachblow.
Hamburg.	Miller's Seedling.	Raspberry-Leaved.
Harison.	Minnesota Seedling.	Red Climax.
Harlequin.	Missouri White.	" Gem.
Hemlock.	Monas Pride.	" Jacket.
Hero.	Monon.	" Kidney.
Hickory.	Motley.	" Neshannock.
Hinman.	Mountain Blue.	" Orange.
Holly Hock.	Nanuet.	" Peachblow.
Holmes.	Napoleon.	" Streak.
Hoosier.	New Hartford.	" Ulink.
Hugh.	New Kidney.	Ridgefield Seedling.
Huntington Seedling.	Noblow.	Rochester Seedling.
H. Ward.	Nonesuch.	Rose Bud.
Hyde's Seedling.	Noyes.	Rose of the West.
Ice Cream.	Niggerhead.	Rose Seedling.
Improved Ashleaf Kidney.	Niggertoe.	Rough and Ready.
Improved Gem.	Ohio Beauty.	Round White.
Irish American.	" Chenango.	Roxbury.
" Blue.	" Mercer.	Royal Ashleaf Kidney.
" Cup.	" Red.	Ruby.
" Orange.	" Russet.	Sandy Brown.
Jackson White.	Old Fleshcolored.	Saranac.
Jenny Lind.	" Kidney.	Scotch Blue.
John Bright.	" White.	" White.
Jones Seedling.	Oneida.	Sebec.
Jug.	Orange Peel.	Seedling Cusco.
Kansas.	Orono.	" Mercer.
Kearsarge.	Oscar.	" Peachblow.
Keystone State.	Pale-Blush Pinkeye.	" Prolific.
King of Jacksoms.	Palmer.	" Rock.
King of Potatoes.	Palmyra.	Sharon.
King of Sweden.	Paragon.	Shaker's Fancy.
King of the Earlies.	Patterson's Albert.	" Russet.
King's Seedling.	" Blue.	Shaw.
Kruger.	" Early White.	Sheridan.
Lackawanna.	" Golden Don.	Sherwood.
Lady Finger.	" Regent.	Silverskin.
Laing's Seedling	Patoka.	Skerry Blue.
Large Seedling.	Peachblossom.	Smith's New Seedling.
Lapstone Kidney.	Pearl.	Snapdragon.
Late Pinkeye.	Peerless.	Snowball.
Late Rose.	Penn. Searchwarrant.	Snowflake Early.
Ledding's Seedling.	Philadelphia.	Snowflake Late.
Little Gem.	Philbrick's Early White.	Soisoto.
London White.	Pigeon Eye.	South Bend.
Long Pond.	Pinkeye Rustycoat.	Starch.
Magnum Bonum.	Pinkeye Strawberry.	Startler.
Mahopac Seedling.	Platt's Seedling.	State of Main
Maiden's Blush.	Plymouth Rock.	Stevens.

Stonehouse.	Week's Seedling.	White Pinkeye.
Strawberry.	Western Chief.	" Rock.
" Mercer.	" Russet.	" Rose.
Temple.	West-Fairview Seedling.	" Sprouts.
Tippecanoe.	West Windsor.	" Ulink.
Titicaca.	Whipple's Seedling.	" Utica.
Topeka.	White.	Willard.
Trip's Garnet.	" Apple.	Williams.
True Lady Finger.	" Chili.	Wm. R. Prince.
Triumph.	" Clinton.	Wilson.
Tucker.	" Cowhorn.	Wisconsin Blue.
Union.	" Eyed Peachblow.	" Seedling.
Utica Pinkeye.	" Lily.	Woodard.
Vanderveer.	" Mountain.	Worcester.
Van Tassel's Seedling.	" Mountain Early.	Yankee Plot.
Vermont Beauty.	" Neshannock.	York Seedling.
" Seedling.	" Peachblow.	Young.
Wampoo.		

ENGLISH AND FRENCH VARIETIES.

The following varieties, the very best cultivated in Europe, were in nearly all the winning stands at the International Potato Exhibition at the Alexandra Palace, London, for the past two years, and are highly recommended both for their extra fine quality and productiveness. One pound of the following named varieties will be mailed postpaid for 75 cents. They are also offered in collections of one tuber each, as follows:

Collections of 5 varieties, 1 tuber each, \$1.50.	Collections of 20 varieties, 1 tuber each, \$5.00.
" " 10 " 1 tuber " 2.75.	" " 40 " 1 tuber " 8.00.

Ashtop Flake.	Jersey Blue.	Quarantaine Violette.
Barrow's Perfection.	King of Potatoes.	Rector of Woodstock.
Blanchard.	Marceau.	Red Emperor.
Bountiful.	Marchioness of Lorne.	Red Fluke.
Coldstream.	Marjolin Cetard.	River's Royal Ashleaf.
Dawes' Matchless.	McKinlay's Lady Webster.	Rogmon Rose.
Early Dimmick.	Model.	Sedila.
Early Union.	Myatt's Prolific Ashleaf.	Scotch Regent.
Excelsior Kidney.	Prince Arthur.	Stanton's Premier.
Fenn's White Kidney.	Prince Teck.	St. Helena.
Fenn's Early White.	Prince of Wales Kidney.	Sutton's Red Skin Flour-ball.
Fenn's Early Market.	Patterson's Victoria.	Sutton's Exhibition Kidney.
Fenn's Perfection.	Patterson's "The Queen."	Sutton's New H'nd'dfold Fluke.
Hayes' Superb Kidney.	Porter's Excelsior.	Wonderful Red Kidney.
Headley's Nonpareil.	President.	Yorkshire Hero.

One Tuber of each variety of the entire collection, correctly labeled, carefully packed, expressage or postage prepaid, for **\$100.**

Collections of 250 varieties, one tuber of each, for \$50.00; 100 varieties for \$25.00; 50 varieties, \$15.00; 25 varieties, \$8.00.



Pringle's Hybridized Potato Seed. {Per pkt. 25cts.

The extraordinary success which has attended Mr. Pringle in his attempts to improve this valuable esculent—which has resulted in the production of the **Snowflake and Alpha**, and last, though not least, the **Ruby**—has encouraged him to still greater efforts in his favorite pursuit of hybridization, and we have now the pleasure of offering a very choice strain of seed saved by him, which is the product of numerous hybridizations between the above named and many of the best new and old varieties in cultivation, both English and American, and includes every strain, which Mr. Pringle will himself sow the coming Spring. Full directions for sowing accompany each packet. Numerous testimonials have been received during the past season in favor of the superior quality of this seed, as well as of its extraordinary productiveness, 5 to 22 pounds of good sized potatoes having been grown by several parties from a single seed.

A New Early Sweet Potato.

EARLY GOLDEN.

This variety originated in Virginia a few years since, with an old cultivator of the Sweet Potato. It is a sport of the old **Early Red**, but said to be far superior to that variety in earliness, productiveness, color, and quality. Slips planted May 10th produced tubers large enough for the market July 25th. On account of its early maturity, it is believed to be better adapted for cultivation in the Northern States than any other variety. In shape they are somewhat shorter than the ordinary varieties, of a golden-yellow color, cook very dry, and are of superior flavor. Another valuable consideration in favor of this variety is that they will grow on quite ordinary soil, with but a slight coat of manure, and yielded a large crop the past season upon land that would not grow above fifteen bushels of corn to the acre. In good soil they will produce many specimens weighing three to five pounds each. It is also an excellent keeper. From what we can learn from those who have tested this variety, we think it will prove the most valuable in cultivation.

We first offered this variety in spring of 1880, and have received many favorable notices from those who have tested it. It matured its crop as far north as Canada. Specimens have been exhibited weighing six pounds. Slips ready about May 15; tubers, early in April.

Price of slips, with directions for planting, by mail, post-paid, 50 cts. per dozen; \$1.00 for fifty; \$1.75 per hundred. By express, at purchaser's expense, \$1.25 per hundred; \$10.00 per thousand.

Price of Tubers, 75 cents per pound; 3 lbs., \$2.00, by mail. By express, at purchaser's expense, 1 lb., 50 cents; 5 lbs., \$2.00; 20 lbs., \$5.00; 50 lbs., \$10.00.

Different Methods of Propagating.

The usual method is to place the potatoes in a hot-bed, and cover them with a few inches of fine soil; the buds will soon start and form shoots; these, as they grow, make roots of their own, and when they are eight inches to a foot long, and well rooted, the most forward ones are removed, and the others not yet large enough are allowed to grow on. It is customary to split the larger potatoes lengthwise, and lay them flat-side down in the bed. After the shoots appear, they should have the same care as other hot-bed plants, to prevent them growing weak and drawn up. These shoots, known in the Southern States as "draws" and "slips," are at the North called "sets" and "plants." Do not set the plants until settled warm weather; then set them well down to the first leaf, fifteen inches apart in the ridge. There will be below the leaf some joints without leaves. Should a frost nip the top, then a new shoot will start from one of the barren joints. The sides of the ridges, and the spaces between them, must be kept clear of weeds until the vines cover the ground; move the vines once a week or so at the North to prevent them from taking root; this is quickly done by means of a rake-handle or other stick. Do not break or cut the vines. At the South the season is long enough to let them take root at the joints, as they will make potatoes then, but at the North we wish to prevent their taking root, and to throw all the strength of the vines into the potatoes that form on the original plant. Be careful, in working among the plants, not to hoe too deeply, as the earliest potatoes lie immediately beneath the surface. Upon digging the potatoes, they should be carefully handled, and put away in boxes or barrels with alternate layers of leaves or cut straw, in a warm, dry place to keep.

The Land and How to Cultivate Them.

The sweet potato may be cultivated on any soil but a heavy one. We have seen fine crops on white sand that would blow into drifts with every heavy wind. A large grower says that he has never seen a sand-hill so poor but what, with judicious manuring, it would bring a good crop; and that any soil which will produce a fair crop of corn will produce one of sweet potatoes, provided it is a sandy loam. He says that he has known a crop in his county of 800 bushels of sweet potatoes to the acre, upon land that would yield 50 bushels of corn, and was fertilized with 400 lbs. of Peruvian Guano to the acre. The manure should be placed on the surface, and the ridges turned upon it from 3½ to 4 feet from center to center. Plant the slips on the top of the ridges as above recommended.

In addition to the above, we offer the Nansmond and Southern Queen varieties.

Prices of Sweet Potato Plants delivered in May or June.

Nansmond.—25 cents per dozen; 75 cents per hundred, by mail: 50 cents per hundred; \$4.00 per thousand, packed, by express.

Southern Queen.—25 cents per dozen; 75 cents per hundred, by mail: 50 cents per hundred; \$5.00 per thousand, by express.

Report of Committee

For awarding PREMIUMS offered by B. K. BLISS & SONS to growers of the largest quantity of POTATOES, from One Pound of Seed.

After becoming fully satisfied of the superiority of the new varieties of Potatoes, introduced by us during the past ten years, we have offered, from year to year, premiums to those who should grow the largest quantity from one pound of seed, of the different varieties with ordinary farm culture, and have paid out within that time upwards of **Three Thousand Dollars** to the successful competitors. The premiums offered for each variety were as follows:

\$250.00 in Premiums.

For the largest quantity of Potatoes grown from one pound of seed, - - - - -	\$100 00
For the second largest, - - - - -	50 00
For the third largest, - - - - -	40 00
For the fourth largest, - - - - -	30 00
For the fifth largest, - - - - -	20 00
For the sixth largest, - - - - -	10 00

Competitors for the prizes were required to give the date on which they gave their order for the potatoes, date of planting, date of digging, with a written statement of their mode of culture, characteristics of the soil—whether clay, alluvial, sandy or loam—nature of the subsoil, whether underdrained or not; also the kind and quantity of fertilizers used, how and when applied, the number of hills, and distance apart each way, with the weight of the crop when dug, and the number of square feet occupied by the crop, which must be witnessed and sworn to before a justice of the peace, notary, or any other one competent to administer the oath.

The awards were made by a committee composed of the following well-known gentlemen in the agricultural community: PROF. GEORGE THURBER, editor American Agriculturist, DR. F. M. HEXAMER, and P. T. QUINN, Horticulturists. They were published in the leading Agricultural Papers, and a copy mailed to each competitor. The prizes were awarded the first of January, of each year.

N. B.—To prevent misunderstanding, we wished it distinctly understood that no prizes would be awarded unless the above requirements were complied with in every particular. Competitors for premiums were placed under no restrictions, as to their mode of culture, excepting that *they must not be grown from slips or forced by artificial heat*, our object being to ascertain their respective merits with such culture as is usually given to crops in a well-managed vegetable garden or farm.

REPORT.

The number of competitors, who, tempted by these liberal prizes, tried their skill and industry in producing a premium crop, was naturally very large. Thousands of reports—representing every Potato-producing State and Territory of the United States, and even many Foreign Countries—nearly all from practical farmers, and many from men who have made Potato-growing their life's work, and may well be called the Champion Potato growers of the world. The practical information embodied in these Reports must naturally be of great value to every tiller of the soil, and at the request of the committee I have endeavored to condense the leading features of the modes and conditions under which these immense crops were grown.

YIELD FROM ONE POUND OF

Compton's Surprise in 1873.	Early Vermont in 1873.	Early Vermont in 1874.	Compton's Surprise in 1874.	Brownell's Beauty in 1874.	Snowflake in 1875.	Eureka in 1875.	Alpha in 1876.	Ruby in 1876.
511	607	708	900	1,018	1,417	1,666	1,707	1,982
450	437	698	874	811	1,304	1,403	1,665	1,694
390	393	690	832	782	1,125	1,149	1,535	1,576
386	380	674	811	749	1,090	1,145	1,511	1,571
		629	684	720	1,089	1,087	1,426	1,534
		615	588	696	1,069	1,066	1,280	1,353

The gradual increase in the yield, from year to year, is at once apparent, and when we consider that several of the largest yields in 1876, were grown by the same persons to whom the highest awards were given at the first trial, and when we consider that this increase in the yield is not due to the greater productiveness of the newer varieties, but solely to the increasing skill of the competitors, and the better management given their crops, we are forced to appreciate the great amount of good which these competitive trials have produced. I am aware that the largest yield from one pound is not always in proportion to the largest yield per acre; nor do these immense yields, produced by the lavish application of manures, regardless of expense, give a criterion of the profits of the crops, after deducting the premiums. Many growers who have produced less than one thousand pounds from one, may have obtained larger profit per acre, than the successful competitors yet no one who has grown a thousand, or even five hundred pounds from one, can have done so without learning something which will be of value to him in growing Potatoes as a field crop, nor can any one read an intelligent report of his methods of cultivation, without benefit.

Soil.—Many of the premium crops were grown on new lands, and on soil of almost unequalled quality. The largest yield was produced on "a mixture of sand and clay, very rich in vegetable matter to the depth of *eighteen feet*, and underlying this is a gravelly subsoil. For three years the ground was used as a stock-yard, the straw being left on the ground to rot and be burned." The second largest product, was grown "on a very rich, sandy loam, rich in decayed vegetable matter to the depth of between two and three feet, and lying upon a compact formation known as hard-pan, which has never been underdrained." Another competitor describes his soil as "black loam, four feet deep, on the bank of a creek, and it has been used as a cattle-yard for ten years." Another, "as vegetable mould and sandy loam, three feet deep, never cultivated before." Most crops however, were raised on deep, alluvial lands, underlaid with gravel; others on light loam with clay or gravelly subsoil, and in a few cases on heavy clay highly manured. In but very few instances was the land artificially underdrained, which seems to be a noteworthy fact, as most writers consider drained soil indispensable for the production of good crops.

Manures.—The large quantities of Fertilizers used by most competitors is something astonishing, and may well serve to disprove the general belief that heavy manuring is injurious to potatoes. Mr. Pearson added to an already very rich soil, about 60 two-horse loads of manure, nearly 200 bushels of wood-ashes, and 24 bushels of lime, per acre, together with bone-dust and other fertilizers in smaller quantities. Mr. Rose, after covering his land three inches thick with rotten barn-yard manure, and three bushels of wood-ashes per square rod, applied in addition, a large shovelful of rotted hen manure, and two handfuls of ashes to each hill, besides several surface dressings with other fertilizers. But all this must appear but a small attempt at enriching the land, to our Scotch friend, Mr. Robertson, who would not entrust his seed to a black sandy loam, four feet deep, underdrained and trenched, to probably the entire depth, before spading under a coat of *five inches* of well rotten cow-dung, and applying afterwards to the hills three cart-loads of wood-ashes, two of sheep droppings, and several other fertilizers.

About the value of wood ashes, and especially in mixture with hen manure and plaster, there seems to be no doubt left; they were used by a large majority and may be considered the Special Potato Fertilizer. Even when applied in very large quantities they have produced no injurious effect. In a few cases, as much as one pint of ashes has been applied to each hill as top-dressing, and in one instance the sets were actually planted in and covered with ashes. Plaster, lime and salt have likewise been extensively used and with great advantage. Strong nitrogenous manures have generally been considered as detrimental to the potato but here we find that many successful growers have used large quantities of Blood, Fish and Peruvian Guano; hen manure as well as barn-yard manure, at the rate of fifty loads per acre, to the greatest advantage and without producing diseased potatoes.

Planting.—The time of planting in nearly all cases was between the 10th and 26th of May, and in the majority of these before the 15th. That single eyes and eyelets will, with good care, produce large crops, has been sufficiently proved. All the large yields were grown from very small sets. In some cases, single eyes were divided into ten pieces, and in one instance two hundred and ninety (290) sets were made from one pound, nearly all of which grew well. The sets, with few exceptions, were planted singly, yet we find a product of nine hundred and seventy (970) pounds raised from fifty-two (52) hills, two sets to each, nearly nineteen (19) pounds per hill, and six hundred and seventy-seven (677) bushels per acre. Whether this large yield is due only to the very favorable soil they grew in—a rich black loam, formerly used as a hog yard—and the immense quantities of ashes applied in the hills and as top-dressing—one peck to the hill—or to the two-set system, does not appear. It is to be regretted that a part of the plat was not planted with one set to the hill, and the products weighed separately. These practical tests, of the feasibility of raising large crops from small sets, become of much importance in seasons of scarcity of seed

potatoes. For it is shown here that, even without carrying the division of the eyes to extremes, nine-tenths of the seed may be saved.

A comparison of the distances between the hills with the average yield per acre gives a most interesting and valuable table, as follows:

The sets planted at a distance of

2 x 3 feet gave a yield of 378 bushels per acre.	3 x 4 feet gave a yield of 372 bushels per acre.
2 x 4 " " " 462 " "	3½ x 4 " " " 342 " "
3 x 3 " " " 651 " "	4 x 4 " " " 332 " "
3 x 3½ " " " 441 " "	4 x 8 " " " 88 " "

The large number of data of which the above figures form an average, give these statistics a special value. It will be seen that although the greatest yields from one pound grew from hills four feet apart, the largest crops per acre were raised at distances of three feet each way, and that as the distances between the hills are increased or decreased, the yield diminishes in regular proportion. In the first case, there remains wasted ground which is not reached by the roots of the plants, and in the latter, the roots are so crowded that they cannot obtain all the nourishment they are capable of consuming.

Cultivation.—It will be hardly necessary to state that in many cases the cultivation and care these growing potatoes received were unremitting and indefatigable. In no case were weeds to be seen in the patch; some of the plantations received semi-weekly hoeings, and all were kept scrupulously clean, and the soil loose and mellow. Yet many large crops were grown with but ordinary care. Mr. J. I. Salter swears "that the cultivation, manuring, etc., was the same he has given his general crop of potatoes for the last five years, and in no respect had there been extra care and labor bestowed." Mr. H. C. Pearson certifies "that these potatoes were grown with the most ordinary farm culture, being hoed only twice and receiving no extra treatment in any respect."

The mode of planting and cultivating with a larger number of the best cultivators consists in crossing their fields with furrows six and more inches deep. The sets are dropped at the crossings and immediately covered with about two inches of soil or compost. The vines as they grow are hilled up gradually and frequently to a final height of twelve to eighteen inches. Then large, broad hills are made, using all the soil between the rows.

Irrigation.—The fact that the largest yields were produced in the Eastern States, in regions which suffered from one of the severest droughts known, where the general crops failed almost entirely, induced us to investigate more closely the manner in which these premium potatoes were grown. As the result we find that all these competitors attribute their success to the judicious application of water during the dry season. One of the competitors had arranged an ingenious system of irrigation, by inserting six inches from each hill, two inch drain tiles, six inches deep, and filling these with water, twice a week, during the dry weather. In reply to a letter he writes: "I attribute my success the past season to the fertilizers applied, but more especially to the mode of applying water. I find that, even without manure, this plan gives great results. Give me drouth and this means of applying water, and I can grow a much larger crop than with the most favorable weather and no watering. This I have proved by two years' experience." Many may not be so situated that they can apply as complete a system of irrigation, but thousands of farmers have running through their lands, brooks and streams which might, without much cost, be made to furnish nutriment to their parcing crops. One acre of potatoes would in many cases pay for more than the entire expense of a permanent system of irrigation. The information about this important subject, derived from the accompanying reports, cannot but prove of the greatest value to all cultivators of the soil.

Although these short extracts, from material sufficient for a large volume, can do but little justice to the importance of the subject, yet they may serve as an outline of the important and valuable information which could in no other way be obtained.

Trusting that the increasing interest in potato culture, stimulated largely by these competitive trials, may be still more productive of information and progress in this important branch of Agriculture,

I am yours respectfully,

F. M. HEXAMER, *Secretary.*

Extracts from the Report of Mr. Nardy, delegate from the French Government to the Centennial Exhibition at Philadelphia in 1876.

"The collection exhibited by the house of Messrs. B. K. Bliss & Sons of New York, is the most remarkable of its kind in the Exposition. The varieties of Potatoes in their exhibit, and the evident care and attention bestowed upon their collection, manifest constant study on the part of the exhibitors. In our opinion theirs was the most complete display of this valuable escu-

lent in the exhibition. To this remark we desire to add a few observations. We sincerely hope that the influence of this horticultural exhibition at Philadelphia will long be beneficially felt among farmers and growers of plants and vegetables. That were in reality all the fruits and vegetables which we to-day enjoy, when Asia, Africa and America sent them to us in their wild state? unfit for eating! Now, after having been cultivated and improved by the gardeners, they have become succulent and nourishing, and pleasant to the taste. By patience and careful cultivation, horticulture has been enabled to transform the type of many species of vegetation into a great number of varieties. Let me take as an example of this, the collection of Potatoes exhibited by these gentlemen which consists of 500 varieties, and we can thus appreciate the patience and researches which must have been necessary to obtain so many useful varieties. The service rendered to the farmers of the United States by the house of B. K. Bliss & Sons is so evident, that we do not hesitate to call attention to them, for agriculture in general derives an immense benefit from these great improvements in useful vegetables, which are mainly due to their initiative. The cultivation of the Potato takes an important rank in the agricultural productions of this country. As a source of revenue, it comes immediately after grain and before tobacco. It is now many years since the senior partner, having a special aptitude for horticulture, devoted himself to that study. In 1845 he founded his first establishment, and year by year, by steady application, and especially by his energy in collecting the rarest seeds and best varieties of useful vegetables from all countries, the reputation of the house constantly increased. He was the first to introduce the Early Rose Potato, which he did in 1867, and his establishment then acquired the important position which it now enjoys. Animated by the spirit of the amateur he has not only sought out varieties in this product, but has endeavored in every way to render a benefit to agriculture by inducing the farmer to improve the cultivation of this esculent.

But if we were to dwell longer on this question, we should be carried too far from our object, which is to call the attention of our French Government to the importance of this house who were so highly distinguished by the jury at Philadelphia, and close this report by expressing our desire that they will send some of their rare specimens to our Paris Exhibition of 1875."

Reports of Three of the Successful Competitors

FOR THE PREMIUMS OFFERED BY US IN 1876.

How to Grow Twenty Bushels and Upwards of Potatoes from One Pound of the Seed.

The following reports have been properly witnessed and sworn to before a Justice of the Peace—in their respective residences—they have also been carefully examined by the committee and found to conform to the rules prescribed in our offer for the Premiums.

(From H. C. Pearson.)

PITCAIRN, N. Y. October 4, 1876.

Messrs. B. K. BLISS & SONS:—I ordered of you April 1st, 1876, one pound each of Ruby and Alpha Potatoes, and planted them May 10th, 1876, and dug them September 28th. The Ruby produced 1,982 pounds and the Alpha produced 1,707 3-4 pounds. The soil was light loam with some gravel with a sand and gravel subsoil not underdrained. The soil was very rich, and its fertility was increased in the Fall of 1875, by spreading broadcast fifty-two horse loads of well rotted manure, three years old, and 150 bushels of ashes per acre, and plowed it under about eight inches deep; plowed and harrowed until perfectly pulverized eight inches deep last May. Placed in each hill before planting, two quarts of compost, composed of thirty bushels of decayed manure, five bushels of ashes, three bushels slacked lime, eight quarts salt, and four pounds of sulphur; the tubers were cut, some of the eyes divided into as many as seven and eight parts, planted one set in each hill, and covered them about three inches deep with soil mixed with some bone dust, making in all 195 hills of the Ruby, 210 of the Alpha; they were planted three and one-half feet apart each way, the number of square feet occupied by Ruby, was 2,364 feet, the number occupied by Alpha, was 2,546 feet. I hoed them three times, making very high, broad hills, watered them several times during July and August, with liquid manure, dug from one hill of Rubys, forty-three potatoes, weight 17 1-2 pounds; used no slips or artificial heat. H. C. PEARSON.

(From J. I. Salter.)

ST. CLOUD, MINN., October 24, 1876.

Messrs. B. K. BLISS & SONS—Sirs:—On the 7th of April, 1876, I ordered of you, one pound each of the "Ruby" and "Alpha" Potatoes. Planted the Ruby on the 31st day of May. Prepared the ground as follows: I spread as evenly as I could on the sward, about equal parts of hen and barn-yard manure, at the rate of five heaping garden wheelbarrowfuls to the square rod,

before plowing, then plowed, turning a furrow ten inches deep and ten inches wide. I then planted my sets, after dividing every cluster of eyes into from three to twelve pieces, in rows four feet apart and as near as convenient, three and one-half feet apart in the rows, dropping but one piece in a place. I covered from two to three or four inches with loose earth. From the pound I made two hundred and ninety (290) sets, the space planted was sixty by seventy feet, (4,200 square feet); hoed but once, when the plants were about ten inches high, making a broad and continuous ridge, flat on the top, and a little depressed in the center; covered the vines all but a very little of the top. Before hoeing, I applied to each plant a large shovelful of fermenting hen manure; it was so hot that it would turn the leaves of plants black, and give them the appearance of being scalded, in less than a minute; I would manure three or four plants, and then cover as quickly as possible. The plants, in a day or two, began to grow and retained a dark green, almost black color until they were killed by the frost. I did nothing more in the way of cultivation.

On the 19th of August, I dug one hill of the "Ruby," and had ten and one-half (10½) pounds; on the 9th of October, I dug of the Ruby eight hundred and twelve (812) pounds; on the 10th of October, I finished digging the Ruby, digging eight hundred and seventy-one and one-half (871½) pounds, making a total of sixteen hundred and ninety-four (1,694) pounds. The "Alpha" was planted the same distance apart each way, had the same cultivation, manuring, etc., as the Ruby, except about fifty hills, that I covered the sets about four inches deep with coarse, unfermented horse manure, and applied no other manure afterward. I covered this manure with earth, the same as I covered the hen manure. I did not get as many large potatoes from these so treated, but about the same in weight per hill; made two hundred and fifty sets. The ground occupied by the Alpha was the same as the Ruby, sixty feet by seventy (4,270 square feet). I also planted two rows of this Potato in hills four feet apart each way. The land in both cases, a black sandy loam, rich in decomposed vegetable matter, usually about two feet deep, under which is hard pan. On the 28th of August, I dug two hills of the Alpha, and had 15 3-4 pounds; on the 12th of October, I dug 1,010 pounds of the Alpha, and on the 13th of October, 640 pounds, making altogether 1,665 3 4 pounds.

These amounts I dug, were grown alone from the one pound each of the above named varieties, purchased from you as I stated above, and without any sprouting or any other means being used than as stated. The land was not drained in any way. J. I. SALTER.

(From Peter Robertson.)

THE GARDENS—HARRIGGE HOUSE, JEDBURGH,

ROXBOROUGH, SCOTLAND, October 4, 1876.

Messrs. B. K. BLISS & SONS:—Gentlemen. I beg to forward to you my report. I ordered of you, March 21, 1876, one pound each of Alpha and Ruby Potatoes. I planted them on April 24, 1876; they were dug October 2 and 3, 1876. The Ruby produced 1,534 pounds, and the Alpha produced 1,246 pounds. The soil is a mixture of black, sandy loam, four feet deep, with a red clay sub-soil and underdrained; it has been lawns or short grass for many years; it was trenched on or about December, 1875, and remained in Winter fur until about April 10, 1876, it was enriched by about five inches of well-rotted cow dung and gas lime rubbish; the ground was then dug in the usual way, care being taken to mix and make it as fine as possible; the rows were six feet apart, and the sets were planted three feet apart, a mixture of about three cart-loads of wood-ashes, two cart-loads of sheep droppings, one lime, two hundred weight salt, all mixed. The tubers were cut and planted in the presence of Mr. Kerr and others. Some of the eyes divided into seven parts; they were very small. Planted one set three feet apart each way; under each, three spadefuls of the above mixture was pulverized three inches deep with the soil, and each set planted one inch deep; they all grew; at first they looked very weak, but gained strength something extraordinary; they were kept free of weeds, and the soil drawn to them as they grew; they were two inches high on May 29, 1876; they got nothing but kept free of weeds, and the soil drawn to them as they grew, until the tubers began to swell; they were then watered with a mixture of sheep droppings and hen manure a few times until they were lifted; there were 176 sets of Ruby, 164 Alpha, single eyes and very small; from one set single eye I had twenty-one pounds; many of the tubers were two and three pounds each. I may also say that I had some very fine, early Cauliflowers and Early Cabbage on the same ground; they were planted between the rows of the Potatoes, and cut before the Potato vines got up to cover the space between; the ground they occupied was forty-six feet by seventy feet, and would be about 3,220 square feet for each variety. Many of the vines remained green until they were lifted. The season was generally good for Potato culture; no forcing process was used whatever.

PETER ROBERTSON.

The Potato Crop.

A Paper Read at the American Institute Farmers' Club.

By Conrad Wilson.

THE annual yield of potatoes in the United States, according to the returns of the last census, was nearly one hundred and fifty million bushels. In view of the increasing attention lately given to this crop, it will doubtless show, at the close of the present decade, a large increase in the amount of the yield, as well as in the number and improvement of varieties. In fact, it may safely be assumed that, in spite of the fears of many in regard to the ravages of the beetle, this crop will still show a yield, at the next census, of over two hundred million bushels.

By its valuable qualities, and its large consumption, the potato ranks in nearly all countries as a leading food staple. It is therefore in every view important, and may always be discussed with interest and profit. There are, of course, some other crops that are grown on a larger scale, and some that foot up a larger yearly aggregate. Yet no product of husbandry is more variously useful, or more generally raised by farmers, and none, if we except wheat, more universally consumed by the people.

A few examples illustrating the rate of yield and the cost per bushel for this crop will tend to show what possibilities belong to it, and thus perhaps stimulate the average farmer to aim at higher results.

Some experiments in potato culture were reported in January of last year, of which the following are a part of the results:

H. C. Pearson, of Pitcairn, St. Lawrence Co., N. Y., produced from one pound of seed, 1,982 pounds of potatoes, of the Ruby variety. He also raised the same year, from one pound of seed, 1,707 pounds of the Alpha variety. J. I. Salter, of St. Cloud, Minn., got the same year, from one pound of seed, 1,694 pounds of the Ruby, and 1,665 pounds of the Alpha; while Alfred Rose, of Penn Yan, N. Y., got 1,576 pounds, and P. L. Wood, of Ill., 1,571 pounds, each from a pound of seed of the Ruby variety. The year previous J. L. Perkins, of Little Sioux, Iowa, obtained 1,666 pounds from one pound of the Eureka variety.

These amazing products were some of the results obtained by farmers competing for the premiums offered by B. K. Bliss & Sons of New York.

The inducements thus held out by this enterprising firm has led to valuable consequences, and the competition has developed the prolific quality of this vegetable to a degree that surpasses all previous conception.

But while duly crediting the liberality and public spirit of B. K. Bliss & Sons, and the grand success of the winning parties, we cannot help regretting that the most important question in potato culture was not included among the offers. It is easy to see that

The Cost of Production

is the underlying question which measures the importance of all the others. Yet this does not at all diminish the value of the test made by Mr. Bliss. The Rubies raised by Mr. Pearson from a pound of seed fell short of a ton by only 18 pounds. This fact has arrested the attention of potato growers as well as consumers in both hemispheres, and confers merited distinction on both Pearson and Bliss; and certainly the tendency of such facts is to help forward the solution of the still greater problem of cost. The man who gets the bottom figures in this problem, though he may not "double the blades of grass," will more than double the product of potatoes.

Since these prizes were awarded I have received statements of cost from several competitors, and hope still to hear from others.

Alfred Rose has reported his cost, in one competition, at less than 15 cents per bushel, and J. L. Perkins about the same. J. I. Salter obtained a yield in one case at about 20 cents per bushel. His latest results I have not learned. Henry V. Rose and M. M. Rose have each reported a cost slightly above the figures obtained by J. L. Perkins and the elder Mr. Rose. For the previous year, Alfred Rose reported his cost at \$55 per acre, and 9¼ cents per bushel. Mr. Perkins has also reported a later crop, since the competition, in which he makes the cost, without manure, \$5.40 per acre, and 5½ cents per bushel.

Various other farmers, since the Bliss competition, have reported to me their yield and cost for potatoes. Lyman Alexander, of Minnesota, got 400 bushels per acre of the Peerless variety, at a cost of about 7 cents per bushel.

Azro Smith, of Rock Bluffs, Nebraska, raised a crop of Extra Early Vermont, of which the yield was 824 bushels per acre, and the cost, as he made it, 4½ cents per bushel. But the cost in this instance, as also in the two previous cases, requires some correction. Every crop should be charged for interest on the land, and when no manure is used, a charge should also be made for exhaustion of soil. This would probably add 2 or 3 cents per bushel to the cost of the three last named crops.

C. C. Holton, of Rochester, N. Y., has reported potatoes at 400 bushels per acre, and at a cost of 12½ cents per bushel. A crop of 600 bushels per acre has been reported by one of the editors of the *Agriculturist*, 640 bushels by C. L. Bragdon, and 700 bushels by P. F. Rice of Polo, Ill. In one of the competitions for the Bliss prizes, Mr. Perkins obtained 376 bushels per acre, and Alfred Rose got 600 bushels of Brownells and 746 bushels of Eurekas.

Let us now take another view of the potato crop that may perhaps shed some light on its utility and value as a food staple.

Feeding Value of Potatoes.

Like Indian corn, this vegetable is everywhere extensively utilized as an article of food, both for the human family and for nearly all domestic animals. Hence it is clear that the nutritive properties of the potato are a question of no little importance to the farmer, and one on which the light of further experience is still greatly needed.

How to convert potatoes, with the best economy, and with the largest profit, into other forms of food, into milk, butter and meat, is a problem not yet fully solved. Various estimates have been made by practical men as to the effective value of the potato in the production of beef, mutton and milk; and though opinions still differ, the proportion of other food staples that potatoes are capable of yielding is nearly indicated in the following statement:

A bushel of potatoes when judiciously fed to animals of a good breed will produce:

Of Beef, - - - - -	from 2 to 3 pounds.
" Mutton, - - - - -	" 4 to 5 "
" Pork, - - - - -	" 4 to 5 "
" Milk, - - - - -	" 35 to 40 "
" Butter, - - - - -	" 2 to 2½ "

It is of course not supposed that potatoes are fed *exclusively* in producing these results, but in a suitable combination with other kinds of feed.

Now the practical value of the above table depends materially upon the amount of potatoes produced from an acre. The average yield of the crop for the whole country is probably not over 100 bushels per acre. And yet it will be seen, from the examples above reported, that over 800 bushels have been produced, and even that is not by any means the final limit of yield. Considering the recent progress of potato culture, and conceding the fact that 1,000 bushels per acre have been occasionally achieved by brilliant farmers, it seems hardly credible that the average yield for the United States is only 100 bushels per acre. What shall we say then? Shall we distrust the return of the last census? or shall we rather credit some progress to the eight intervening years, and claim that the average is now very much better. One thing at last seems clear. If the progress of the next two or three years shall correspond to the same period of the past, it may safely be assumed that the average yield of potatoes for the coming decade will not be less than 200 bushels per acre. I venture therefore to assume this figure as the coming average, and if any of our twenty million farmers are disposed to quarrel with me for claiming this yield, my best revenge will be to prove the possibility and then to tell them how it may be done.

If now we apply to this estimate the figures of the above table, we shall discover

What an Acre of Potatoes Means,

when expressed in the form of other food staples. We shall find that it is measured

In Beef, - - - - -	by 400 to 500 pounds.
" Pork, - - - - -	" 800 to 1,000 "
" Mutton, - - - - -	" 800 to 1,000 "
" Milk, - - - - -	" 7,000 pounds, or over.
" Bread, - - - - -	" 4,000 "
" Butter, - - - - -	400 "

Again, as I have already shown that the total potato product of this country is nearly certain to reach 200 million bushels as the average for the next decade, it will be seen that if the above figures are extended so as to meet this case of the total product, then it will be found that

The Annual Potato Crop of the United States

is equivalent		
In Beef, - - - - -		to 400,000,000 pounds.
" Pork, - - - - -		" 800,000,000 "
" Mutton, - - - - -		" 890,000,000 "
" Milk, - - - - -		" 7,000,000,000 "
" Bread, - - - - -		" 4,000,000,000 "
" Butter, - - - - -		" 400,000,000 "

Let us now take another view of this subject. If Mr. Pearson had taken his crop of Ruby potatoes that were produced from a pound of seed, and by a right mode of feeding, had converted them into butter, according to the above estimate, the outcome of his experiment would have been about sixty pounds of butter in the Fall, as the legitimate result of one pound of potatoes planted in the Spring. Or if he had converted the potatoes into mutton, the result would have been 120 pounds.

Again, when Azro Smith harvested over 800 bushels of potatoes from one acre, if he had fed that crop to a good breed of cattle, it would have produced, according to the above estimate, at the rate of two pounds of beef for each bushel of potatoes, making a total of 1,600 pounds of beef, as the product of one acre, or if, instead of beef, he had converted the crop into milk, the result would have been over 20,000 pounds.

These results, of course, depend in part on the above estimate for the feeding value of potatoes. On this point there is room for some difference of opinion. But it would be easy to show that when potatoes are combined with other well-selected elements, and fed in the right proportion to animals of good breed, and good capacity, the estimate given is not far out of the way. But to place the matter beyond any question, if we reduce the estimate by 50 per cent., it would still be possible for Pearson to plant his pound of potatoes in the Spring, and harvest in the Fall either 30 pounds of butter, or 60 pounds of mutton; and Azro Smith would still be able to show from his acre of potatoes, that an acre of beef is equivalent to 800 pounds, and an acre of milk to 10,000 pounds.

DURRA (Sorghum Vulgare).

This plant has been offered at various times under the different names of Douhra, Indian, or Great Millet, Guinea, or Negro Guinea Corn, Chocolate Corn, Ivory Wheat, and Pampas Rice. We consider it right to mention this, to prevent misconception. Above we give the botanical name, and that by which it is most generally recognized where the consumption is greatest.

Durra is a valuable forage-plant, growing from 8 to 10 feet in height, and yielding an abundance of grayish-green foliage greatly relished by stock. It is frequently grown for grain, and yields largely. One grower in California reports having harvested as high as 200 bushels per acre.

The culture is very simple; when grown for the grain, it should be planted in hills and given plenty of room; the space given to common corn is not any too much. For fodder, sow in drills from 2 to 3 feet apart, dropping the seeds 3 to 4 inches apart in the drill; when 6 or 8 inches high, thin to about 8 or 9 inches apart; and when it has attained a height of 4 or 5 feet, it may be cut for forage, which can be continued every third or fourth week until frost.

Prices by mail: per ounce, 10 cents; per pound, 65 cents. By express, at purchaser's expense, 50 cents per pound.

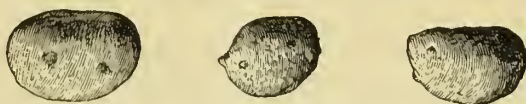


DURRA (*Sorghum Vulgare*).

NEW EARLY FIELD CORN—QUEEN OF THE PRAIRIE.

A variety of Yellow Dont Corn which on Long Island has proved one of the earliest varieties of Field Corn in cultivation. It was planted in 1879 after the wheat crop had been harvested, and matured the crop perfectly. Selected ears, 25 cents; 3 lbs., by mail, post-paid, \$1.00; shelled, \$1.25 per peck; \$3.50 per bushel.

Dioscorea Batatas—Chinese Yam.



DIOSCOREA BATATAS—BULBLETS FROM THE AXILS OF THE LEAVES.

One of the most valuable esculents in cultivation, though but little known. Stem twelve to twenty feet in length, of rapid growth, of creeping or climbing habit, forming an excellent covering for a screen; flowers small, white in clusters; leaves, heart-shaped. The root is of a pale russet color, oblong, regularly rounded, club-shaped, largest at the lowest end. Plant eight inches apart, in a deep, light soil, tolerably rich, and thoroughly stirred two feet deep. A well grown root, two years from the bulblets, will measure two feet in length, and two and one-half inches in its broadest diameter, and is quite hardy, remaining in the ground over Winter without protection. The flesh is remarkably white, and very mucilaginous in its crude state. They may be boiled or roasted, and when cooked possess a rich-like taste; are quite farinaceous, nutritive, and valuable for food. It is also a very desirable climbing plant, suitable for covering screens, arbors, and unsightly places.



Extract from a letter in the *Rural New Yorker* from a correspondent who has cultivated this plant for many years.

"The Chinese Yam possesses merits that should commend it to the agricultural classes of the United States, yet there are many who don't even know that it is grown in this country, although it is more than twenty years since its introduction here, from China. The difficulty all new beginners have to contend with in the culture of this esculent is a proper understanding of its wants. I have grown them for twelve or fifteen years, and will give the readers of the *RURAL* the benefit of my experience:

In the first place, select a soil that is moderately dry, deep and rich, and prepare it by spading or plowing deeply; then plant the bulblets eight inches apart each way. When the large roots are used for planting they should be cut up in pieces about one inch in length. They will produce much stronger roots than those grown from the bulblets. They will need to be cultivated a few times the first year, to keep weeds down and soil loose. After the first year, keep the weeds hoed off or mowed down, as you prefer. The Yams are perfectly hardy, standing in the ground all Winter and growing again when Spring comes, increasing in size for a number of years. They increase naturally from the small tubers that grow on the vines just above each leaf. These should be saved in the Fall, and kept during Winter where they will not freeze, as freezing injures their growth, and planted in the Spring as soon as the ground gets warm.

As to the product per acre, in the best of soil, with three years' growth and tubers planted eight inches apart each way, we could safely calculate on getting six and a quarter tons of Yams per acre. Some may think this a large yield, but I believe it is not as large as I should put it and think it is not an overestimate. I have only cultivated them on a small scale, but have come to the above conclusion with regard to their productiveness. A few years ago, I was digging in an old bed of them where they had been left to grow for several years, and such a sight! The ground was literally full of roots, measuring one and a half to two

DIOSCOREA BATATAS. feet in length, and one and a half to two inches in diameter at the largest end, and this too where the soil was not more than eight or ten inches deep.

They grow in a perpendicular position with the large end downwards. The vines are ornamental, having heart-shaped leaves edged with scarlet and are very pretty. A few tubers planted near a door or window and the vines trained over and about it, make an ornament worthy the admiration of all. The flowers are numerous and have a cinnamon fragrance, but the vines do not bloom until the roots are two years old. In garden culture I let the vines run on the ground, except those I wish to save tubers from for seeds. These I set stakes or poles to, as I think by this method the tubers are produced in greater abundance and of large size.

There is scarcely any difference perceptible to the taste between the Chinese Yam, when properly cooked, and the Irish potato, although the Yam is much whiter and somewhat finer grained.

Some object to growing them on account of the great depth to which the roots penetrate. But to those I find no difficulty. I commence digging at the end of a row, take out what I want, and leave the hole open. The next time I dig I commence where I left off, and throw the dirt where I dug before; by this way I have the soil stirred so deep that it is in fine condition for planting out more tubers.

They have no insect enemy, and drought affects them but very little, as they root so deeply. There is no necessity for their being dug at any time of the year, except when wanted for immediate use. They are suitable for cooking any time in the year. A person can plant enough at any planting to do his family for years, each year bringing him larger Yams. I consider them safer to depend on than the Irish potato, which has its enemies, and is so sensitive to a little freeze.

I believe their proper cultivation would be attended with success anywhere in the United States. If the masses of the people better understood their nature and were better acquainted with their many fine qualities, they would be more generally grown. In conclusion I will say that they are the most profitable crop that I cultivate.

Small bulblets, which form roots about a foot in length, in one year, in packets of one dozen, 20 cents. \$1.50 per hundred. One year old roots \$1.25 per dozen; \$6.00 per 100.

MAPES' POTATO MANURE.

Ammonia, 4.50 to 5 per cent. Phosphoric Acid, 8 to 10. Potash, 6 to 8.

Price, per ton, 2000 lbs., \$51.00 - - - - bag (200 lbs.) \$5.10.

This has proved a complete Manure for Potatoes on all lands, supplying the potash in *ample quantity*, and the phosphoric acid *even in excess* of the demands of the crops. The phosphoric acid is found in practice to be *relatively* deficient in most soils for potatoes. This is shown by the excellent results frequently attending the use on potatoes of an ammoniated superphosphate containing *no potash and little ammonia*, but *rich in phosphoric acid*. In the cases where a superphosphate or a dissolved bone act so well on this crop, there must be an ample supply of available potash as well as of magnesia, etc., in the soil itself, as is sometimes found in clay loam soils, and those of a shale or slaty character. *Sooner or later the continual culture of potatoes, or any other crop requiring potash and other similar alkaline ingredients largely, and using mainly bone and phosphates, must result in getting the land out of balance, and the crops suffering in consequence both in quality and quantity.*

In Washington County, New York, where potatoes are the main crop with many farmers, the average yield has fallen to one hundred bushels per acre, and yet, within the memory of some of the present growers, the yield per acre on the same lands has in former years been 300, 400, and even 500 bushels per acre.

The Mapes' Potato Manure supplies all the ingredients required to restore such lands as *above* named, and to permit of continued cropping of potatoes, as far as plant food is concerned, on any lands, without exhaustion of the soil. It will constantly improve the condition of the land, and leave it in better "heart" for any crop.

The liability of the crop to suffer from the ravages of the potato disease is greatly reduced by having the soil well supplied with full quantity of available plant-food. Experience has shown that on new, virgin forest soils, or those well supplied with the products of burnt brush-heaps, the disease rarely attacks the crops, even under conditions of sudden changes of weather, so favorable for the parasitical attacks and fungus growth so destructive of the crop.

DIRECTIONS FOR USE OF MAPES' POTATO MANURE.

May be used in the hills or rows, mixing and covering with earth, and distributing well.

Scatter it down the rows, mix it as thoroughly as possible, in any manner which best commends itself, with plow, hoe, brush, etc. With ordinary care, the potatoes will not be injured, and the crop will invariably be heavier than when the manure is applied broadcast. Use *two to four* bags per acre.

E. S. BROWNELL, ESSEX JUNCTION, Vt., the well-known originator of "Brownell's Beauty," "Centennial," "Pride of America," "White Star," and other celebrated seedlings, wrote to B. K. Bliss & Sons, New York, September 27th, 1880: "I bought of you last spring some of Mapes' Potato Manure, which *excelled* any fertilizer that I ever used in *producing smooth and large tubers*. I got *one-third more* crop than was produced alongside when it was not used."

NEW, RARE, AND CHOICE SEEDS.

NEW TOMATO—MAYFLOWER.



In this new seedling variety, which we have the pleasure of introducing this season, all the qualities desirable in a Tomato are combined in a degree not heretofore attained. It is the earliest large Tomato cultivated, ripening but a few days later than "Little Gem," and averaging in size about one-third larger than "Acme." It is of a glossy, bright red color, so desirable in a market Tomato, and ripens so evenly and perfectly up to the stem, that it presents a most beautiful appearance. Its shape is perfect, globular, slightly flattened and perfectly smooth; flesh solid, unusually free from seeds, and of a pure, rich flavor. In productiveness it is not excelled by any other sort, bearing full crops until killed by frost. Its skin is firm and smooth, indicative of the best shipping qualities. A box of them which, after having been roughly handled during a long journey, was exhibited by us at the last Grand Exhibition of the Massachusetts Horticultural Society, held at Boston, in connection with the Exhibition of the American Pomological Society, and was awarded the first prize as the best seedling. Price, 25 cents per package; five packets, \$1.00.

THE EARLIEST AND BEST DWARF WRINKLED PEA!

THE MOST
DESIRABLE



PEA EVER
INTRODUCED.

The earliest and most prolific Dwarf-wrinkled Pea in cultivation.

Illustration is taken from a photograph, and shows one Vine half natural Size.



The best Pea for forcing under glass, and unsurpassed for early sowing.

Extra Early, requires no bushing, and is of most exquisite flavor.

BLISS'S AMERICAN WONDER PEA.

READ ON THE FOLLOWING PAGE WHAT THE PRESS AND PUBLIC SAY OF THIS PEA.

BLISS'S AMERICAN WONDER PEA.

THE BEST VARIETY FOR FORCING UNDER GLASS, AND THE BEST FOR
EARLY SOWING IN THE GARDEN.

☞ On account of its exceedingly dwarf habit, it can be grown in Hot-beds, like cucumbers or lettuce.

This new and fine-flavored variety is a seedling, the result of a cross between the favorite varieties, *Champion of England* and *Little Gem*, raised by Mr. Charles Arnold, the well-known Canadian agriculturist. It combines all the good qualities of both its parents, with the additional ones of superiority in flavor to the *Champion*, and of greater productiveness than the *Little Gem*, besides being earlier than any other of the wrinkled varieties. Peas planted June 5th were ready for the table in thirty-three days from the date of planting. On good soil, each vine will average twelve pods, and each pod six peas. Twenty-seven to forty-one pods have been counted on some vines, and ninelargo peas in some of the pods, and every pod is well filled. The vine grows from eight to ten inches high, according to the soil and season. Having full confidence in the superiority of this variety, we bought the entire stock of the originator, and first offered them in the spring of 1878, since which they have been tested in various parts of the world, and have met with the unqualified approval of all who have given them a trial. For the past three years the demand has been far greater than the supply, and we have been unable to fill our orders.

Voluntary Testimony in Favor of Bliss's American Wonder Pea.

From **Rev. Henry Ward Beecher**, July 14, 1881.—Your Peas are wonderful, none others so good. I do not mean to plant another year any others, early or late. They beat the Alpha in earliness and out of sight in flavor.

From **Hon. Marshall P. Wilder**, *Pres. American Pomological Society, Ex-Pres. U. S. Agricultural Society*, June 30, 1881.—My AMERICAN WONDER is a wonder, equal in sweetness and richness to the *Champion of England*, which is all that could be desired.

A correspondent from Santa Clara, California, says: "Having seen it stated that the AMERICAN WONDER PEA had yielded as much as fifteen pods to one vine, I looked at my Peas, and selected a few single standing vines. I counted the pods, including all that had dropped the blossoms, filled and partly filled, and counted on the first vine examined twenty-seven pods; on the second twenty-five; on the third twenty-nine; and on the fourth thirty-five. Two days afterward I was in the patch again, and counted on one vine forty-one pods that were filled and hardening, partly filled, or that had just dropped the blossoms. The peculiarity of this Pea seems to be that it sends out a branch at every joint or leaf-stalk, and on these the fruit is borne."

From **A. A. Halliday**, Bellows Falls, Vt., July 5, 1881.—Last spring I purchased of you, among other things, one quart of BLISS'S AMERICAN WONDER PEAS, which I sowed about the last of April. The first of June they were large enough for the table. At one time I could have picked two bushels of Peas from them, many of the pods being as large as the *Champions*, and containing nine large peas. I consider them far ahead of any early pea I have ever seen. The land on which they were sown is a light sandy loam, and there was not a pound of any kind of fertilizer used on it this year.

From **Geo. P. Sherwood**, Portland, Me., August 8, 1881.—Amongst the other seeds purchased of you last spring was one package of your AMERICAN WONDER PEA. I find them all that you claim, and thinking that you would like to know the result, I inclose a list of the number of pods on each of 52 vines (total 511), which I selected at the time they were ready for table. I found that the average number of peas in the pods was seven.

One of our growers writes, August 25, 1881: "Twenty-seven and one-sixth bushels of AMERICAN WONDER PEAS were grown from one bushel of the seed you sent, upon a triflo over an acre of ground."

From **A. A. Duncielliff**, New South Wales, May 21st, 1879.—I exhibited at the late Inter-Colonial Exhibition, in Sydney, *Bliss's American Wonder Pea*, and they received a special diploma, being highly esteemed on account of their quality and earliness, so that they have quite eclipsed the best English varieties tested against them, and the product of the seed is grand in size and quality.

In alluding to the above, the *Sydney Morning Herald*, of April 22, adds: "Among vegetables specially worthy of notice was *Bliss's American Wonder Pea*, shown for the first time. It is remarkable for the rapidity of its growth, as it is ordinarily ready for the table in thirty-three days from the time of planting. Mr. Duncielliff had three crops since September last."

(Extracts of letters from the well-known Seedsmen, Messrs. Sutton & Sons, England, and Ernst Benary, Erfurt, Prussia.)

Royal Berkshire Seed Establishment, Reading, England, July 16, 1880.

Messrs. B. K. Bliss & Sons: We have given a careful trial to the *American Wonder Pea* you were good enough to send us for trial, and we must say we are exceedingly pleased with it.

(Signed)

Sutton & Sons.

Erfurt, Prussia, November 6th, 1880.

This new American introduction, for which we are indebted to Messrs. Bliss & Sons, New York, has with us proved to possess in every respect the good qualities for which it was recommended. Not only is it the earliest of all the marrow kinds, but it is at the same time the dwarfest of all Peas, attaining a height of 8 inches only. Despite its pygmean stature, it has shown itself to be a heavy cropper, each plant having borne on an average 10 to 12 well-filled pods. The dark green foliage lends to the plants a pleasing appearance. The flavor of the peas being furthermore particularly fine, I do not hesitate to highly recommend this valuable and distinct American introduction as in every way worthy of general adoption."

(Signed)

Ernst Benary.

CAUTION.—As there is another pea in the market called *American Wonder*, which has been offered for the past two seasons, we last Summer procured samples from several dealers, which when tested were in every case found to be entirely unlike the one introduced by us, being later, much taller, and inferior in quality and productiveness. We would, therefore, caution all of our friends in want of the genuine variety to call for "**Bliss's**" *American Wonder Pea*, and receive no other.

PRICES—One-third pint package, 20 cents; pint, 55 cents; quart, \$1.00; by mail, post-paid. When delivered at our store, or sent by express at the expense of the purchaser: one pint, 40 cents; one quart, 75 cents; half-peek, \$2.75; one peek, \$5.25. Prices for larger quantities upon application.



DAY'S "EARLY SUNRISE."

This is a new and distinct variety from England, and is one of the earliest marrow Peas. During the past season, it has been tested by many eminent gardeners, who were unanimous in pronouncing it exceedingly prolific, and of superb quality. It is a white wrinkled marrow, very large for an early Pea, and of fine flavor; while in constitution and habit it is hardy and robust. It is from 2½ to 3 feet in height; the pods, which are long, large, and well filled, are produced in pairs, and almost completely cover the lamina. By its grand size and quality it is specially adapted for market gardeners and for field culture.

PRICE—¾ pint packets, 15 cents; pint, 50 cents; quart, \$1.00; by mail, post-paid. By express or otherwise: Pint, 40 cents; quart, 75; peck, \$4.50; bush., \$15.00.

RURAL BRANCHING DURRA.

The value of this as a forage-plant is becoming better known every year, and but for the fact that it was for a time confounded with other varieties, it would have received an earlier recognition of its merits. It is essentially different from all other Durras, from the fact that they produce but one stalk, whereas this variety throws up from six to sixteen stalks from each seed. It starts a new growth readily after being cut for fodder, and will in this way produce two or three crops a season.

A correspondent from Lancaster, Pa., writing Jan. 2, 1882, says: "I consider Branching Durra the best forage crop I ever planted. I fed eight head of mules from a half-acre patch the past season (from the 15th of June to the 12th of November); it is also excellent food for cows, and they are very fond of it. It grows very rapidly, and stands drought remarkably well. What I used as feed, I fed green; but it can be cured, like other grass or fodder.

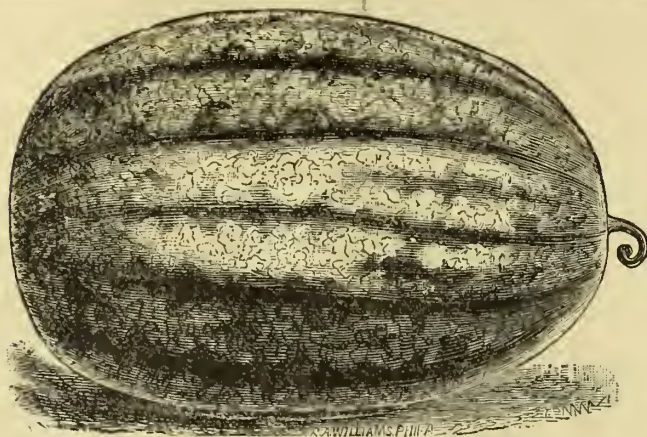
"The Branching Durra, or Sorghum, can be cut here from four to five times during the season, the first two cuttings being very heavy. I plant it in four-foot rows, and three feet apart in the drills, and when well up thin out to two stalks in the hill, and cultivate like corn."

Five pounds is sufficient to plant an acre.

Price, by mail, post-paid, per pkt., 10 cents; ¼ lb., 20; 1 lb., 60 cents.

NEW RYE—THOUSAND-FOLD.

A desirable European novelty, producing enormous heads, from six to eight inches in length; grains very large and full; and, as its name implies, an unusually prolific variety. Price, trial packets (about 500 grains), 25 cents; one pound, by mail, \$1.00.



CUBAN QUEEN WATERMELON.

CUBAN QUEEN WATERMELON.—This magnificent new melon is certainly the largest and finest variety ever introduced, and was the admiration of all during the past season. The skin is beautifully striped, dark and light green, of the latter there being two shades agreeably diversified. The vines are very strong, healthy, and vigorous in growth. The flesh is bright red, remarkably solid, peculiarly luscious, crisp, and sugary, and its delicious flavor is unsurpassed. It is an excellent keeper, and although the rind is unusually thin, being scarcely more than half an inch thick on a melon of enormous size, will bear transit to distant markets well. Their great size, handsome appearance, thin rind, red flesh, and delicious taste are so captivating that they cannot fail to bring extra prices wherever put on sale.

The three heaviest melons, for which a premium of \$50 was offered last Spring by the introducer, weighed, respectively, 81 lbs., 75 lbs. 11 oz., and 75 lbs. Price, per packet, 15 cents; 1 oz., 50 cents; $\frac{1}{4}$ lb., \$1.75; lb., \$6.00.



PERFECT GEM SQUASH.

PERFECT GEM SQUASH.—This variety, unlike anything before offered, is excellent both as a summer and winter squash. It has all the properties of the best of both classes. It is a vigorous grower, and wonderfully productive. Its habits are somewhat peculiar. After setting the squashes near the root, like the bush varieties, it commences to run, and the vines often attain a length of twenty feet, and are very thick and strong, branching in a similar manner to the Ornamental Gourd, and often bearing quite as abundantly. The squashes are from four to six inches in diameter, flattened, of a creamy white color, slightly ribbed, and have a thin, smooth skin. The flesh is fine-grained, and when cooked is dry, very sweet, and has a delicious flavor, entirely free from that strong taste common to all of the winter squashes. It is remarkable for its keeping qualities. In a dry, cool room, free from frost, they may be kept until spring. In short, it is justly entitled to the name given it, being equal to the best bush or marrow squash for summer use, and better than any other for winter. A good keeper, very productive, a free grower, and worthy a place in every kitchen garden. Price, 15 cents per packet; oz., 30 cents; $\frac{1}{4}$ lb., 75 cents; lb., \$2.50.

GRAINS.

NEW WHEAT, "GOLDEN GRAINS."

FOR SPRING OR FALL SOWING.

This is a very hardy and most productive variety, with long stiff straw, standing well, stools heavily, and frequently grows from twenty-five to seventy stalks from a single grain; the ears are long and closely filled with full, plump grains, with but little chaff. It is without doubt the largest grained Wheat ever seen, being fully three times as large as our best common Wheat. During the past season, it has produced at the rate of sixty-four bushels per acre, without any special culture. This Wheat grows with a beard until it begins to ripen, after which all the beard falls off. In the West it has been grown successfully as a Spring Wheat, but for this section it is a Winter Wheat, and stands freezing and thawing well. One pound by mail, \$1.00.

SPRING WHEAT.

PRINGLE'S NEW HYBRID SPRING WHEATS.

The two following varieties were first offered by us in 1878, and the most satisfactory reports of their yield and quality have been received from growers in all sections of the country. In order to see what it would do under careful cultivation, we offered premiums in 1878 to the amount of \$250.00, to be divided among those who produced the greatest amount from one pound of seed—also for the best and largest heads. Some of the reports were truly wonderful, and showed what good culture and good seed will do. 761 pounds of Champlain, and 528 pounds of Defiance were raised, each from one pound of seed. Many of the best heads measured six to seven inches in length, and produced from 80 to 90 kernels per head. The prize collection was exhibited at the American Institute in the Fall of 1879, for which a Diploma was awarded. These two varieties were also awarded the *first and second prizes* at the *Intercolonial Exhibition at Sydney, N. S. W., Australia*, in April, 1879, as the best new varieties exhibited. Our correspondent informs us that they attracted much attention and received many special visits from millers and growers from other colonies, as well as their own.

CHAMPLAIN.

791 Pounds Grown from One Pound Seed.

Was produced in 1870 by Mr. Pringle, in his endeavors to unite the remarkable hardness of the Black Sea with the fine and superior quality of the Golden Drop. Several varieties were the result of this hybridization, from which this one was chosen, as realizing the end in view, showing greatly increased vigor and productiveness over both its parents. A continued careful selection has now fully established its character, and we have a Wheat bearded like the Black Sea, with the white chaff of the Golden Drop, free from rust and smut, yielding a lighter colored grain than the former, and producing a flour of *superior quality*. Its strong and vigorous straw stands erect, and frequently bears, with very ordinary culture, heads from five to six inches in length, containing from sixty to seventy-five kernels each.

DEFIANCE.

528 Pounds Grown from One Pound Seed.

This variety of Wheat is the result of a series of experiments by Mr. Pringle in 1871, to incorporate superior qualities upon the hardy stock of our common Club Wheat, by hybridizing it with one of the finest, whitest, and most extensively grown sorts of the Pacific coast.

It displays great productiveness, vigor and hardness; is a beardless white chaff Wheat, with heads frequently five to six inches long, very closely set with large white kernels, frequently numbering seventy-five to eighty to the single head. Its white, stiff, erect straw, exempt from the attack of rust, its earliness, combined with great vigor and superior qualities, claims for it universal trial.

Prices of each variety, \$1.50 per peck; \$5.50 per bush.; bags containing two bushels, \$10.00.

Trial packages by mail, post-paid, one pound, 40 cents, three pounds, \$1.00. Special quotations for larger quantities.

EXPERIENCE WITH PRINGLE'S NEW SPRING WHEATS.

EDITORS PRESS:—In answer to your call for information, I send you a few heads of Defiance Wheat. I produced one pound of B. K. Bliss & Sons on the 12th of March, 1878, and sowed it on the 14th. On the 15th of July I harvested 146 pounds of clean wheat, after its being visited twice by seven horses for over an hour at a time. Last year I got 20 sacks from the 146 pounds, with which I sowed about 25 acres, of which these heads are fair samples. It appears to have stood the blasting winds better than the White Chile sown beside it, and remained green after the other became quite yellow. Another good property which it possesses is that it does not rust. The pound sown in 1878 was free from rust, while other wheats sown beside it were quite rusty.

T. A. PERLEY, Woodbridge, San Joaquin Co., Cal.

In consonance with the report of our correspondent is the testimony of A. M. Southworth, in the last issue of the *Los Angeles Herald*. From one pound of seed, sown grain by grain in drills, in 1879, he raised 508 pounds of wheat. He reports the Defiance this year free from rust. The same is true of the Champlain wheat, which, it will be remembered, was sent out at the same time by Bliss & Sons, of N. Y. Mr. Southworth sowed some of the original Champlain from the East, and some of the California Champlain, grown by A. J. Scroggins, of Tulare Co., who, it will be remembered, took one of the Bliss prizes. The California Champlain was nearly twice as good in all respects as the other. Mr. Southworth pronounces both the Defiance and Champlain adapted to the rich bottom-lands of Los Angeles County. What have other growers to say of these wheats?

PRINGLE'S HYBRIDIZED EXCELSIOR HULLLESS OATS.



"Pringle's Hybridized Excelsior Hullless Oats."

straw is remarkably firm, while the grain is twice the size of the Chinese. The question of most importance in regard to the new variety is, will it retain these characters? Mr. Pringle has had it in cultivation for a number of years without its having shown any deterioration, and the fact that it has held its own where the common varieties do not gives reason to believe that it is as permanent as can be expected of an Oat. Its yield is double that of the old Hullless, chief use of which is to grind into oatmeal. The fine large grain of the hybrid will be especially valuable for this purpose. We notice that B. K. Bliss & Sons have given it the name of "Pringle's Hybridized Excelsior Hullless Oats," which, however descriptive, is starting a new variety on its career rather burdened with name. Should it attain the popularity we hope for it, the farmers will, as soon as it comes into general use, drop some of these titles as superfluous, and it will be either "Pringle's" or the "Excelsior Hullless."

Price, per peck, \$2.50; bush., of 32 lbs., \$7.00; trial packets, by mail, 4 oz., 25 cents; 1 lb., 60 cents; 3 lbs., \$1.50.

Mr. C. G. Pringle, the well known successful hybridizer, to whose efforts we are indebted for the celebrated *Champlain and Defiance Wheats*, *Snowflake, Alpha*, and several other standard varieties of *Potatoes*, has been successful in imparting important improvements to another cereal.

With a view to impart to the hullless species the size of plant, vigorous habit, and productiveness of one or other of the favorite hulled sorts, Mr. Pringle, amongst other experiments, hybridized the well-known *Excelsior Oats* with the Chinese *Hullless*, and the experiment proved, beyond question, highly successful, the result being the variety now offered.

It is quite distinct from the Chinese, with splendid straw, tall and stiff as that of the *Excelsior*, and with a panicle as broad and numerous seeded as in that variety. It is exceedingly prolific, being equal in yield to the best hulled varieties, and double that of the Chinese hullless oats. As a variety for milling purposes, the *Excelsior Hullless* is destined to become rapidly popular, not alone on account of absence of husk and freedom from bran, but also on account of the size of the grain, and the excellent and nutritious quality of the meal produced from it.

We sent out one-ounce trial packets of this variety last Spring, from which we have heard wonderful results. Mr. Henry Talbot, of Ashtabula County, Ohio, says that from one ounce of these oats he last season saved over ten pounds of seed, each grain produced, on an average, stools of ten straws each, every straw being heavily laden with kernels, which, when thrashed, resemble the grain of rye, but when growing the plant looks exactly like common oats.

From the *American Agriculturist*.—Mr. C. G. Pringle, of Vermont, whose wonderful success in crossing and producing new varieties of wheat, and in raising new and most valuable kinds of potatoes, are well known, has succeeded in producing a new Oat. The common Chinese *Hullless* was hybridized with the "Excelsior," a variety of the common Oat, of marked size and vigor. The result has been an Oat which, while it has the strength and robust character of the best common Oat, retains the peculiarity of the naked seed.

The engraving, of half the real size, gives a panicle which is so densely branched that it must be very prolific; the size of the Chinese. The question of most importance in regard to the new variety is, will it retain these characters? Mr. Pringle has had it in cultivation for a number of years without its having shown any deterioration, and the fact that it has held its own where the common varieties do not gives reason to believe that it is as permanent as can be expected of an Oat. Its yield is double that of the old Hullless, chief use of which is to grind into oatmeal. The fine large grain of the hybrid will be especially valuable for this purpose. We notice that B. K. Bliss & Sons have given it the name of "Pringle's Hybridized Excelsior Hullless Oats," which, however descriptive, is starting a new variety on its career rather burdened with name. Should it attain the popularity we hope for it, the farmers will, as soon as it comes into general use, drop some of these titles as superfluous, and it will be either "Pringle's" or the "Excelsior Hullless."

NEW IMPROVED DWARF OKRA.

This is an improvement on the old Okra, and promises to be quite an acquisition. It grows but fourteen inches high, has long, slender pods, and is very productive. Per packet, 10 cents; oz., 30 cents; ¼ lb., \$1.00; lb., \$3.00.

THE AMERICAN GARDEN.

A Monthly Illustrated Journal, Devoted to the Gardening Interests of America.

ONE DOLLAR A YEAR.

Contains sixteen large pages of closely printed matter, relating to the **Flower, Fruit, and Vegetable Garden, the Lawn, Greenhouse, and Window Garden**, and all other branches of **Horticulture** in its various departments. A specimen copy will be sent free on application.

The January number being the last number of **THE AMERICAN GARDEN** as a quarterly, as well as the first number as a monthly, subscribers for 1881 can have the remaining 11 numbers for 1882 sent on receipt of 90 cents, or for \$1.00 their subscription will include the January, 1883, number.

Dr. F. M. HEXAMER, Editor.

B. K. BLISS & SONS, Publishers,

All orders should be addressed to the Publishers.

34 Barclay Street, New-York.

This popular Magazine, heretofore issued quarterly, will hereafter be published *monthly*, about the first of every month.

Volume III commences with the January number, 1882, and it is desirable that subscriptions should begin with the first number of the volume, although they may be entered at any time for a year from the date of entry.

VALUABLE PREMIUMS for 1882.

Some of our readers have expressed the opinion that our journal is good enough without premiums, and we fully agree with their judgment; yet when we read the many favorable commendations which we receive almost daily about our premiums distributed during the past year, we cannot but believe that to the majority of our subscribers the premium seeds have been highly acceptable. We offer, therefore, to every subscriber of **THE AMERICAN GARDEN** for 1882 **the choice of one package of any one of the following seeds, with directions for culture:**

Wild Garden Seeds, a package containing a mixture of upward of one hundred varieties of Flower Seeds, sufficient for a square rod of ground.

Improved German Ten-Weeks Stock. These beautiful flowers are far too little known in our gardens, and we hope by offering them among our premiums to introduce these floral gems to many of our readers.

May-Flower Tomato. A new variety now offered for the first time, the great excellence of which has been indorsed by the Massachusetts Horticultural Society in awarding it the first prize for the best new Tomato.

Bliss's American Racer Pea. (A trial packet.) We have grown this new Pea for several years on our experimental grounds, and consider it one of the earliest, most productive, and best Peas known. Our stock of seed is as yet too limited to enable us to offer it for sale, yet we are so strongly convinced of its superior value that we offer it as a premium—the only way in which it can be obtained—to our subscribers, trusting that it will prove as valuable an addition to the list of new vegetables as the American Wonder Pea, offered by us last season.

THE AMERICAN GARDEN

Sends its greeting to every cultivator of the soil, to every lover of fruits and vegetables, of flowers and home adornments; to the wealthy country gentleman who can lavish his thousands a year on the scrupulous care of his lawns, parterres, and hot-houses, who can employ all the skill, labor, and material necessary to accomplish his aim; as well as to those whose gardening is limited to the care of a few flower-pots on the window-sill.

It knocks at the door of every farm-house where the wives and daughters, if they would enjoy a dish of delicious strawberries and a bountiful supply of fresh vegetables, or if they would delight in the glory of a beautiful flower-bed in the door-yard, must themselves become the master gardeners. It asks admittance to the homes of the thousands of suburban residents who strive to make their limited grounds as attractive and useful as possible without entering into general farming.

NOTICES OF THE PRESS.

We have no doubt that this handsome journal will meet with all the success it deserves, and from all we know of its editor, and the enterprise of its publishers, its deserts will prove of no mean order.—*Rural New-Yorker*.

THE AMERICAN GARDEN being edited by Dr. F. M. Hexamer, the readers will be sure that its teachings will be sound and practical, and that it will not be a mere advertising sheet.—*American Agriculturist*.

THE AMERICAN GARDEN is well fixed, both in its publishers and in its editorial features, and we predict a wide success for it.—*Pacific Rural Press*.

THE AMERICAN GARDEN abounds in plain, practical directions for raising garden "sass" and flowers, not to speak of fruit-trees and various household pcts.—*New-York Mail*.

THE AMERICAN GARDEN, we are sure, will be very useful to the class for whom it is intended.—*Gardener's Monthly*.

THE AMERICAN GARDEN is well filled with valuable matter, and promises well for its future existence.—*Botanical Index*.

THE AMERICAN GARDEN (of which, when our readers remember that it is edited by Dr. F. M. Hexamer, it would be but a redundancy to say that it is eminently practical, trustworthy, and enjoyable as well).—*New-York Tribune*.

THE AMERICAN GARDEN, a very handsome paper, has greatly improved since it changed hands. Its leading articles are ably written, and its selections such as are sure to please and instruct.—*Floral Cabinet*.

SPECIAL OFFER.

THE AMERICAN GARDEN FOR 1882 FREE.

Purchasers of Seeds in packets to the amount of **Four Dollars** (in one order) at Catalogue prices, may select as premium, either **THE AMERICAN GARDEN** for 1882, or the offer of Seeds on page 3. Purchasers to the amount of **Eight Dollars** (in one order), whether in packets or otherwise, will receive, on application, **THE AMERICAN GARDEN** for 1882, free.

Valuable Agricultural Books for Sale by B. K. Bliss & Sons.

MAILED, POST-PAID, AT THE FOLLOWING PRICES:

Farm and Garden.

Allen's (R. L. & L. F.) New American Farm Book.....	\$2.50
Barry's Fruit Garden.....	2.50
Brackett's Farm Talk, paper, 50 cents; cloth.....	.75
Brill's Farm Gardening and Seed Growing.....	1.00
Broom-Corn and Broom, paper, 50 cts.; cloth.....	.75
Brist's Family Kitchen Gardener.....	1.00
Flax Culture. By seven practical growers.....	.30
Gregory on Cabbages.....	.30
Gregory on Carrots, Mangold Wurtzels, etc.....	.30
Gregory on Onion Raising.....	.30
Gregory on Squashes.....	.30
Hand-book of the Grasses of Great Britain and America.....	1.50
Henderson's Gardening for Pleasure.....	1.50
Henderson's Gardening for Profit.....	1.50
Hop Culture. By nine experienced cultivators.....	.30
Johnson's How Crops Feed.....	2.00
Johnson's How Crops Grow.....	2.00
Nichol's Chemistry of the Farm and Sea.....	1.25
Onions—How to Raise them Profitably.....	.25
Our Farm of Four Acres, paper, 30 cts.; cloth.....	.50
Potato Culture. (Prize Essay).....	.25
Quinn's Money in the Garden.....	1.50
Riley's Potato Pests, paper, 50 cents; cloth.....	.75
Roe's Play and Profit in my Garden.....	1.50
Roe's Success with Small Fruits.....	5.00
Silos and Ensilage.....	.50
Stewart's Irrigation for the Farm, etc.....	1.50
Thomas's Farm Implements and Machinery.....	1.50
Tobacco Culture. By fourteen experienced cultivators.....	.25
White's Gardening for the South.....	2.00

Fruits and Flowers.

American Rose Culturist.....	.30
American Weeds and Useful Plants.....	1.75
Breck's New Book of Flowers.....	1.75
Eliot's Flower Garden Directory.....	1.50
Chorlton's Grape Grower's Guide.....	.75
Elliott's Hand-book for Fruit Growers, paper, 60 cents; cloth.....	1.00
Flowers for the Parlor and Garden (Rand).....	2.00
Fuller's Grape Culturist.....	1.50
Fuller's Illustrated Strawberry Culturist.....	.20
Fuller's Small Fruit Culturist. (New edition).....	1.50
Fulton's Peach Culture.....	1.50
Garden Flowers; How to Cultivate (Rand).....	2.00
Hardy and Tender Bulbs (Rand).....	2.00
Heinrich's Window Flower Garden.....	.75
Hudson's Practical Floriculture.....	1.50
Husmann's American Grape Growing and Wine Making.....	1.50
Johnson's Winter Greenhouses at Home.....	1.00
Mohr on the Grape Vine.....	1.00
My Vineyard at Lakeview.....	1.25
Orchids. Manual of Orchard Culture (Rand).....	2.50
Parsons on Strawberry Culture.....	.75
Parsons on the Rose.....	1.50
Popular Flowers; How to Cultivate Them (Rand).....	1.50
Quinn's Pear Culture for Profit.....	1.00
Rivers's Miniature Fruit Garden.....	1.00
Robinson's Ferns in their Homes and Ours.....	1.50
White's Cranberry Culture.....	1.25

Horses.

Dadd's Modern Horse Doctor, 12mo.....	1.50
Dadd's American Reformed Horse Book.....	2.50
Herbert's Hints to Horse-keepers.....	1.75
Miles on the Horse's Foot.....	.75
Yonatt and Spooner on the Horse.....	1.50

Cattle, Sheep, and Swine.

Allen's (L. F.) American Cattle.....	2.50
Coburn's Swine Husbandry.....	1.75
Dadd's American Cattle Doctor, 12mo.....	1.50
Dadd's American Cattle Doctor, 8vo, cloth.....	2.50
Guenon on Milch Cows.....	.75
Harris on the Pig.....	1.50
Quincy (Hon. Josiah) on Soiling Cattle.....	1.25
Randall's Fine Wool Sheep Husbandry.....	1.00
Randall's Practical Shepherd.....	2.00
Randall's Sheep Husbandry.....	1.50

Stewart's Shepherd's Manual.....	\$1.50
Yonatt and Martin on Cattle.....	1.50
Yonatt and Martin on the Hog.....	1.00
Yonatt on Sheep.....	1.00

Poultry.

Corbett's Poultry Yard and Market, paper, 50 cents; cloth.....	.75
Geyelin's Poultry-Breeding.....	1.25
Gray's The Game Fowl.....	1.50
Lewis's Practical Poultry Book.....	1.50
Samders's Domestic Poultry, paper, 40 cents; cloth.....	.75
Stoddard's An Egg Farm, paper, 50c.; cloth.....	.75
Wright's Brahma Fowl.....	2.50
Wright's Practical Poultry-Keeper.....	2.00

Architecture and Landscape Gardening.

Allen's (L. F.) Rural Architecture.....	1.50
Atwood's Country and Suburban Houses.....	1.50
Barn Plans and Out-buildings.....	1.50
Downing's Landscape Gardening.....	6.50
Elliott's Practical Landscape Gardening.....	1.50
Leuchar's How to Build Hot-houses.....	1.50
Palliser's Model Homes.....	1.00
Plumbers', Carpenters' and Builders' Guide.....	1.00
Reed's House Plans for Everybody.....	1.50
Woodward's Cottages and Farm Houses.....	1.00
Woodward's Country Homes.....	1.00
Woodward's Graperies and Horticultural Buildings.....	1.00
Woodward's Suburban and Country Houses.....	1.00

Field Sports and Amusements.

Batty's Taxidermy and Home Decoration.....	1.50
Batty's How to Hunt and Trap.....	1.50
Bogardus's Field, Cover and Trap Shooting.....	2.00
Canoe and Camera. Square 12mo.....	1.50
Dogs of Great Britain, America and Other Countries.....	2.00
Hallock's Sportsmen's Gazetteer.....	3.00
Hooper's Dog and Gun, paper, 30 cents; cloth.....	.60
Long's American Wild Fowl Shooting.....	2.00

Miscellaneous.

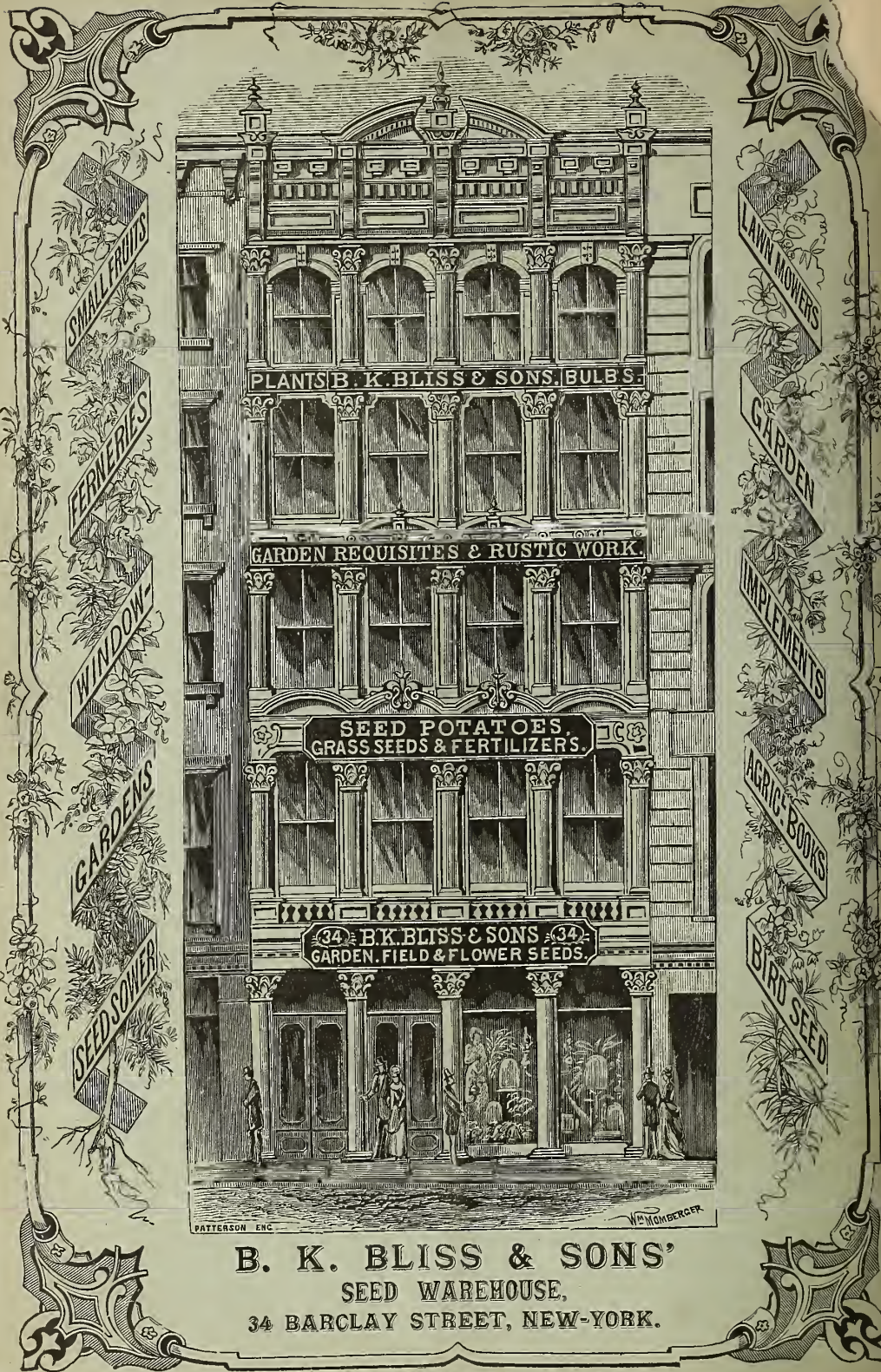
American Bird Fancier (Enlarged Edition).....	.50
Bement's Rabbit Fancier.....	.30
Bommer's Method of Making Manures.....	.25
Book of Household Pcts, paper, 50 cents; cloth.....	.75
Bonssingault's Rural Economy.....	1.60
Caldwell's Agricultural Chemical Analysis.....	2.00
Canary Birds, paper, 50 cents; cloth.....	.75
Cooked and Cooking Food for Domestic Animals.....	.20
Cooking Manual (Miss Juliet Corson).....	.50
Cooking School Text Book and Housekeepers' Guide (Miss Juliet Corson).....	1.25
De Voe's Market Assistant.....	2.50
Fuller's Forest Tree Culturist.....	1.00
Gardner's How to Paint.....	1.00
Grant's Beet Root Sugar.....	1.25
Harris's Insects Injurious to Vegetation. Plain, 84; Colored Engravings.....	6.50
Harris's Talks on Manures.....	1.50
Hazard's Butter and Butter-Making.....	.25
Hedges's Sugar Cane and their Products.....	1.00
Johnston's Agricultural Chemistry.....	1.75
Johnston's Elements of Agricultural Chemistry.....	1.50
King's Bee-keepers' Text Book, cloth.....	1.00
Quinby's New Bee-Keeping.....	1.50
Rhododendrons. Revised edition. (Rand).....	1.25
Riley's Locust Plague.....	1.25
Root's A B C of Bee-Culture.....	1.25
Scribner's Lumber and Log Book.....	.35
Stewart's Sorghum and its Products.....	1.50
Twenty-five Cent Dinners, New Edition (Miss Juliet Corson).....	.25
Warder's Hedges and Evergreens.....	1.50
Ware's The Sugar Beet.....	4.00
Waring's Draining for Profit and Health.....	1.50
Waring's Earth Closets and Earth Sewage.....	.50
Waring's Elements of Agriculture.....	1.00
Willard's Practical Butter Book.....	1.00
Willard's Practical Dairy Husbandry.....	3.00

LONDON GARDENER'S CHRONICLE.

Subscriptions received for this popular weekly publication. Price to subscribers in the United States, including postage, \$7.50 per year.

LONDON GARDEN.

A weekly magazine devoted to gardening in all its branches. A colored engraving and other illustrations in each number. \$7.50 per year.



B. K. BLISS & SONS'
SEED WAREHOUSE,
34 BARCLAY STREET, NEW-YORK.