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AN ACCOUNT OF

Various Experiments

FOR THE PRODUCTION OF NEW AND DESIRABLE

GRAPES,

AND A DESCRIPTION OF

FORTY VARIETIES

OBTAINED BY

HYBRIDIZATION.

BY

GEORGE HASKELL.

IPSWICH, MASS.:

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EXPERIMENTS.

In offering these vines for sale, it may be interesting to grape-growers to know the various methods and labors by which I have sought to obtain new varieties: it may also be a caution and great help to others engaged in similar efforts, to know of the many failures and meagre success of such labors.

The aim of all my efforts has been to obtain vines which would bear our winters, be free from mildew and other disease in summer, and bear good fruit which would ripen in this section. These efforts commenced many years ago, under these circumstances:—On reading the Treatise of Mr. Prince on the Vine, soon after it appeared, in 1830, I got interested in the subject and determined I would have a vineyard. In the ardor and greenness of youth, I bought two hundred Isabella vines of J. B. Russell, who then kept an agricultural store in Boston, and two thousand cuttings of the same kind of Mr. Samuel Pond, of Cambridge. These were planted and tended with care and expectation for several years, but I never obtained a drop of wine or a peck of ripe fruit from the whole of them.

Finding the Isabella would not succeed in our climate, I began the search for a good native, in the swamps and woods of this region. Whenever I heard of a wild vine bearing fruit called good, I invariably visited it, and I have travelled many miles, and for several years, through the swamps, woods, and morasses of this section, in quest of a grape worth cultivating. Some, of course, were better than others, and all that were better or earlier than the general run, were removed to my own grounds; but they did not improve, or were hardly as good, when grown in the warm, dry soil of a garden.

I then began to plant the seeds of these best natives, and continued to do so for three generations of vines, without obtaining, out of many thousands thus raised, a single fruit that I regarded worth propagating, and only a few of them have been preserved; but the earliest and best of native vines, thus obtained, have been used in crossing with the foreign.

Simultaneously with these efforts, I raised many hundred vines from seeds of different foreign grapes. These seeds were planted

under glass, and the vines remained in the house two years, when they were removed to the open air. None of them proved healthy or would bear our winters. Some of them lived to bear fruit for a year or two, but they all died in a few years, though well covered every winter.

I then sought to obtain better fruit by grafting the native upon the foreign, and planting the seed of the native, thus grown upon the foreign root; but I could not discover any improvement in the fruit of the seedlings grown from such seed. I also sought to obtain hardihood of vine, by grafting the foreign upon the native and planting the seed of the foreign thus grown upon the native root; but the vines of such seedlings proved no hardier than seedlings from a foreign, ungrafted vine. In neither case did the stock appear to have any influence upon the character or fruit of the vines grown from seed of the graft, nor were such vines different from seedlings of the same species, when grown from seed of ungrafted vines.

I then tried to modify the fruit of seedlings through the agency of the foliage, and as soon as the fruit was formed on each species I inarched the new shoot of the other species into the shoot bearing the cluster just above the fruit. When the union of the shoots was complete, in about two weeks, I cut out the shoot proper to the fruit at the point of union and took off all the foliage on that shoot below the cluster: thus leaving the fruit with no foliage but that of the other species to nourish and mature it. White grapes were thus grown under the foliage of black grapes, and black under the foliage of white, and each retained its proper color, though the texture and quality of the fruit seemed to be changed by the alien foliage. The foliage of the foreign was thus placed over the fruit of the native, and the foliage of the native over the fruit of the foreign.

The seeds of fruits thus grown, were planted for several years, but the result was a great disappointment. I did not find such a decided effect as I expected. The vines from the seed of foreign fruit, thus grown, were not so hardy or healthy as I desired, nor was the fruit of native seedlings, thus grown, good enough to be propagated. Perhaps the latter, had they been tried a few years longer, might have improved, and farther south the former might have grown successfully; but, unfortunately, none have been preserved for such further trial.

My next method of seeking for the desired fruit was, by inarching the new shoot of the foreign upon the native, and of the native upon the foreign, as soon as the fruit was formed, both below and

above the section of the cane bearing the cluster; and as soon as the union was complete, the cane bearing the cluster was severed from its own root and deprived of all its leaves; thus having the fruit of each species, with about three inches of its cane, grown and matured upon the root and under the foliage of the other species. I hoped some of the seed, thus grown, would produce vines possessing the desired qualities. (A full and more particular account of this process was published in the *Country Gentleman*, in September, 1863.) After laboring for years in this method, the vines thus obtained were abandoned as worthless. I now see the folly of my impatience in rooting them up after trying their fruit for only one or two years. Indeed, I should now regard vines, thus obtained, as of the highest interest, affording, as they would, some evidence of the influence of an alien root and leaf upon the offspring of seed thus matured. A few of the vines, thus obtained, were grafted near the ground, and I am trying to start shoots from the roots, to restore the original vine to view.

Thus baffled again, in my efforts to obtain the desired fruit, I began to cross-fertilize the flowers, foreign with the native and the native with the foreign, using many varieties of each species, of different sizes, colors and flavors in the fruit, and having differences in the form and other characteristics of foliage

This method has been pursued for fifteen years, and more than eighty different crosses have been effected, counting the second crosses, between the half-bloods, and of the half-blood back upon the original species. During the last ten years these crosses have not been made at random, but vines possessing some desired qualities, have been selected for union with other vines possessing other desired qualities, in the hope of uniting all such qualities in one fruit and vine. More than a thousand seedlings have been thus produced; several of them have borne fruit for eight or ten years, many of them for three to five years, and a few have never fruited, though not, organically, infertile. A docket has been kept of all these crosses, and of each vine thus produced, in which is noted its parentage, and habits of vine and qualities of fruit, during its whole existence.

The varieties now offered were thus obtained, registered and tried, and their qualities, as thus ascertained in this unfavorable part of the country, are correctly stated.

In selecting the fruit that appeared worthy of propagation, I have not preserved the vine when the fruit retained too much of the characteristics of the native parent. If it was too sour, too hard in

pulp, too small or too foxy, or if the cluster was small, or much broken, or irregular in form, or if the fruit shook easily from the stem when ripe, I have thrown the vine away. Since then, I have seen ^{some} so much improvement in the fruit and cluster, after the vine had ~~some~~ ^{worn} fruit for a few years, that I regret my conduct in this respect very much. I think some of those destroyed would have outgrown the defects for which I condemned them, and might have proved to be some of the best.

In selecting them for hardihood, I have left them for the winter to kill and weed out those constitutionally too tender to survive it; as I have never laid them down or covered them, even in this severe climate. In selecting them for healthiness, I have discarded and thrown out all those generally affected with mildew, and those occasionally affected with it so much as to prevent the ripening of the fruit. Some of the best fruits, however, have been retained, though the vine is occasionally, and to some extent, subject to its attack, as they may be entirely free from it in a dryer atmosphere, or farther from the sea-coast. In selecting them for early maturity, I have not condemned them altogether, because they failed occasionally to ripen here, if they possessed other required merits. Several such have been ripened under glass in a cold-house, and it then appeared that, with a summer a few weeks longer, or more steadily warm than ours, they were surpassed by few of the foreign grapes in size, beauty or flavor; notably was this true of Three, Three-Twenty-Five, Three-Eighty-Seven, and Four-Twenty.

I have thus briefly stated the different methods by which I have tried to obtain the desired grape, and some of the repeated and diversified experiments made for that purpose. These experiments have been carried on more than forty years—not a year having passed during that long period, in which I have not obtained and planted the seeds of native and foreign fruit, modified, lately, I had hoped, by the artificial use of nature's processes. This effort has not been omitted even when I was busy with professional cares and occasionally charged with official duties, nor on account of any trouble or expense to which I might thereby be subjected. The result has been very interesting, and partially successful; but how far successful, can only be determined by a full and thorough trial in other sections of the country, better adapted than this to the cultivation of this valuable fruit.

I am sorry the success has not been more obvious and decided; but, thinking it will be a long time before any other individual will be so unwise as to spend his money, time and thought in such ef-

forts, or will do so with a better chance of success, I have concluded to offer to the public the fruits of these labors, such as they are. I had hoped to obtain a reimbursement of my money-outlay in this matter, but see no chance for even that. The nurserymen will not buy the stock of any of them, or even take them to propagate, until there is a call for them—and there will not be a call for them until they are generally known; and if distributed so as to be generally known, the originator is *minus* the whole undertaking. Whether I obtain any pecuniary recompense for the products of these labors, may be a question of justice; but it is not by any means a matter of necessity with me. I hope the fruits obtained will be a benefit to the public, and that the future will show them to be of great value to the country, in both an economic and commercial aspect.

I shall exercise the right of an author in giving them names, and shall preserve the numerical names now affixed to them. Such names are perfectly distinctive, are easily remembered, and can be briefly expressed in figures upon a plan, tag or order.

It may be objected that I am sending out too many varieties,—that it will confuse and perplex purchasers. But this distribution of varieties is only tentative; not that it can be desirable to propagate and multiply largely so many varieties in any locality. These have been selected, after years of trial from more than a thousand seedlings, of different crosses, and every one was selected because it possessed, when grown here, more than one desirable quality of vine or fruit. How they will thrive in other localities can only be known by trial; and it is to obtain such trial, and the selection of the best for each section that so many are offered. I also desire to have so many of these seedlings taken for trial in other sections, because I do not believe we shall ever obtain a variety that will be the best and most valuable in all sections. No such single variety is known in Europe, where the differences in soil and climate are less than in this country, and there is no reason to expect such a variety here. Another advantage of this distribution of many kinds will be, that seedlings of these hybrids will be obtained in other sections from a greater variety, in parentage, and with a better chance of finding among them vines adapted to those sections, and, quite likely, bearing better fruits than those yielding the seed.

Again:—no one variety will suit all palates best, either as fruit or for wine. In submitting these fruits to the most experienced and competent judges of grapes, I have been surprised at their diversity of taste and choice. They would all agree, generally, upon

the best ten or twenty ; but if asked to designate the best two, or three, or five, they would differ widely, each having a preference for the flavor, texture, or comparative sweetness of a particular and different grape. Of course, to meet these different tastes, it is well to have a number of varieties of differing qualities propagated and tried. It might be supposed, from the similarity in many of the descriptions given, that the fruits were much alike. But it will be found that those much alike in form, color and other characteristics which can be stated in language, are yet quite different in flavor, taste and relish.

Another reason for the trial of so many kinds, is the hope that some of them, if planted in a soil suited to their native parent, will be safe from the attack of the Phylloxera. It will be observed, that most of the vines described, are from crosses with what is popularly called the Fox grape—but accurately it is the *Riparia*—a species which is found generally, in a wild state, only in swamps and on the banks of streams. The *Vulpina* and *Labrusca* are only other names for varieties of the same species, and they do not accurately describe any species, as the pungency on the lips and the fox odor, are not uniformly found in the fruit of either of them.

Recent experiments in France have shown that the most effectual eradication of the Phylloxera was by flooding the ground, and thus drowning the insects. As the *Riparia* of this country flourishes, and really does best in wet bogs and meadows, even when the roots are immersed in water all winter and the soil is saturated all summer, may we not expect that this trait will prevail in some of these hybrids and make them almost proof against the Phylloxera, especially if planted in such wet soils ? I shall place them in such soils and localities, and hope others will do so too, that the experiment may be fairly tried.

The belief that these grapes are worthy of distribution and trial, is strengthened by the judgment of many competent persons to whom I have sent the fruit. These opinions of others, however, have been formed and expressed, from an inspection and trial of the fruit only, and without any knowledge of, or reference to, the qualities of the vine, except, perhaps, from a general knowledge such persons may have of the ungenial part of the country in which the vines have been raised and fruited.

The following are the opinions of some of the gentlemen to whom the fruit has been sent.

In October, 1869, I sent several varieties to Marshall P. Wilder, which he, in company with Robert Manning, examined and made notes of as follows :—

295. "Sweet to the skin; pulp rather tender, vinous, sprightly; color dull-amber reddish; a considerable improvement on the native."

300. "Same color, similar constituents, but leaving a rough, astringent taste at the skin."

309. "Like 300, but acidity in place of roughness."

325. "Smaller bunch and berry, sweeter, rather hard pulp, sweet and rich."

387. "Larger bunch; color dark and dingy; hard pulp; sprightly and good; winy."

126. "Dark amber; the ripest ones chestnut color; appears to have passed its maturity."

334. "Sweet and tolerably rich, but pretty foxy, leaving considerable astringency in the mouth."

339. "Apparently later, not so well colored, but having a Catawba smack."

346. "Berry largest and most foxy of all; chestnut color; a slight remove from the native."

The next year, at the request of Mr. J. B. Garber, of Columbia, Pa., I sent eighteen varieties to him, which, in company with three gentlemen of that neighborhood, he examined, and they sent me a detailed report of their opinion of them. I suppose they furnished the following account of them, which I find in the "Lancaster Farmer," November, 1870:—

"Then we have received a box containing eighteen varieties, all hybrids, from Mr. G. Haskell, of Massachusetts. These are all new, none of them yet out of the hands of the originator. Some of them were somewhat damaged by being delayed on the way. We, in company with several other grapists, on testing and tasting these new grapes, fully agreed that they were very promising. Should these varieties, or some of them at least, improve by being grown in our latitude, or still further south, as the Concord is known to have improved, then these new ones are certainly worth looking after. Mr. Haskell is a persevering experimenter, having already in 1869 fruited between six and seven hundred seedlings, of which he has selected twenty of the best for further trial, and has over two hundred fruiting for the first time this last season. These many varieties are the product of more than thirty crosses, and he is still continuing his experiments. Of course, among so many there will be a large portion that will probably be no improvement on older sorts; yet he can hardly fail of producing some very superior varieties."

Three years later, in 1873, I sent nine varieties to the editors of the "Country Gentleman," and their opinion of them was stated in that paper for October 23d, as follows:—

"The grapes came in fair order—a little the worse for time and transportation, but so that we were able to judge well of their quality. The collection consists of nine seedlings, but as we are not

told from what varieties they are crossed, we are unable to judge how successful the experiments have been by way of improvement on the parents. On comparing the flavor with the Concord, we find at least two-thirds of better flavor, with a strong tendency towards sweetness. Nos. 36, 74, 325, 371 and 387 are quite sweet, and of very fair quality, so far as we can judge from so imperfect a trial. The others are not so good, and one or two rather poor. Of the growth, hardness or productiveness of the vines, we have no means of knowing. We have thus given our opinion, as these grapes appear to us—an opinion liable of course to revision on a better opportunity for judging."

In 1874, I sent six varieties to the editors of "Colman's Rural World," in St. Louis, and in that publication for November 14, 1874, the following statement is made in regard to them:—

"The grapes came to hand in good condition, showing that our correspondent knows how to pack such things. No. 371, bunch small, berry medium, round, dark red; thin skin, small seeds, but plenty of them; pulp soft, sweet and pleasant.

No. 325, Large bunch, shouldered; berry oval, a little above medium in size; thin skin, melting pulp; very rich and sweet.

No. 387, Bunch medium; berry do, slightly oval; thin skin, soft pulp, sweet, spicy and rich in flavor; pale red in color.

No. 36, Bunch and berry medium; round, dark red; first-rate.

No. 295, Bunch medium; berry a little above round; pale greenish red; skin thin; pulp dissolving, sweet and pleasant; very good, we would call it.

No. 74, Bunch medium; berry large, oval, black, with a fine bloom upon it after travelling fifteen hundred miles; skin thin; pulp soft and melting, sweet and aromatic; most valuable of the lot, in our opinion. There is a touch of Black Hamburg in this last that pleased us very much. If these grapes improve when grown here, as usual, we look for some valuable additions when they are set out. We should like a few grapes of each to try them, and will most likely be able to report by the fall of 1876.

All the Rogers' hybrids are so much improved in size of bunch and in quality, when grown here, that they would hardly be taken for the same variety. This we would expect of Mr. Haskell's grapes also."

A number of varieties were sent that same year to the editor of the "Massachusetts Ploughman," and he commented upon them in that paper as follows:—

"We acknowledge with pleasure the receipt of a variety of seedling grapes from George Haskell, Esq., of Ipswich. Some of them were of excellent quality and worth propagating. No. 74 was especially fine it seemed to us, though it was perhaps fresher and more in its best condition as to ripeness. Some of the samples were a little over ripe."

The same season they were sent to Mr. Meehan, of the "Gardener's Monthly," and he expressed his opinion thus, in Nov., 1874:

"GRAPE SEEDLINGS FROM MR. GEO. HASKELL, Ipswich, Mass.

These are some of the best we have seen, and when the high northern latitude is considered, show how marked has been grape improvement of late years. There are among them black, white and red bunches ; and some of the bunches of considerable size."

Another parcel was sent to the editors of the "Country Gentleman," and in that paper for November 5, 1874, they are described as follows :—

"Nos. 74 and 118 are black grapes, of very tender skin, little pulp, and sweet and good flavor. The first named appears to be an excellent grape. But none are large and showy enough to produce 'a sensation.' Nos. 295 and 387 are light brown, quite sweet, and hardly so good as the black ones."

In the same year, 1874, seven varieties were sent to Wm. Saunders, Superintendent of the Government Experimental Grounds, at Washington, and he sent me the following report upon them, which he consents to have me publish. In consenting to have me publish this report, however, he adds:—"I have long ago learned that no one can tell anything about the general value of a grape by simply testing a bunch of its fruit ; and that opinions formed upon such slight acquaintance are of little value." His report of the fruits was as follows :—

No. 325. "A very fine flavored grape, and very large, fine looking bunch."

No. 36. "Bunch of fair size ; berries spicy in flavor ; drops readily from the bunch."

No. 74. "As fine looking as a Black Hamburg, and about as good in flavor ; really a splendid acquisition."

No. 387. "This is, to my notion, the best, and most delicately flavored grape of the number ; a superior table fruit."

No. 371. "The smallest of the lot, both in bunch and berry, and not conspicuously good."

No. 118. "A very pleasant grape, somewhat tart ; perhaps not quite as ripe as it might be."

No. 295. "Very like 325 in flavor ; bunch not so large, but good size notwithstanding."

"These six grapes are, perhaps, finer than any six named hardy grapes that are now in cultivation."

The next year, 1875, six varieties were sent to Marshall P. Wilder, and he made the following notes upon them, which I am permitted to use :—

No. 74. Black ; berries large, oval ; thick bloom ; juicy, sweet, sprightly ; pulp tender ; seeds large ; one of the best natives we have ever tasted."

No. 420. Black, medium size, slightly oval ; skin thick, thick bloom ; pulp firm ; rich, vinous, sprightly ; holds on well ; very good."

No. 118. "Black, round, thick bloom ; skin not so thick as last and seeds larger ; otherwise much the same."

No 26. "Resembles the Catawba in many respects, with thicker bloom, and holds on well."

No. 287. "Chestnut color; thin bloom, round, medium size; thin skin; pulp rather tough, very sweet and rich; adheres strongly."

No. 325. Color like the last, with dots like the wild type; medium size; thin bloom; sweet; juicy; pulp rather tender; seeds small; sprightly; vinous near the skin with foxy aroma."

"On the whole, this lot impresses us much more favorably than on former occasions, showing the influence of hybridization in breeding out the native aroma, while yet more may be done in the way of producing pulp more tender."

Mr. Wilder submitted these varieties to the examination of the Fruit Committee of the American Pomological Society for Massachusetts, and they report thereon (page 119) as follows:—

"Mr. George Haskell, of Ipswich, has for several years been engaged in hybridizing the grape, and has produced a large number of varieties, among which are several of excellent quality. Of six varieties presented by him the present season, five were entirely free from the peculiar foxy flavor of the native grape."

Ten varieties were also sent to Dr. Robert Hogg, editor of the London Journal of Horticulture, and the following mention is made of them in that publication for Nov. 11, 1875:—

"We have received from Mr. George Haskell, of Ipswich, Mass., a collection of ten varieties of SEEDLING GRAPES, raised by crossing the native *Vitis riparia* with European varieties, and *vice versa*. These are very curious, and some of them are very excellent varieties. The influence of the cross is very apparent in all of them, and it is quite possible that in this way varieties may be raised that will ripen out of doors in this country. Even in this unfavorable season Admiral Hornby has ripened one of the American Grapes at the Cottage, Knowsley, and Mr. E. J. Beale has been equally successful at Twickenham. One or two varieties which have the Black Hamburg and White Chasselas for their male parents are very good indeed, and have a flavor which is quite peculiar."

Similar opinions have been expressed by many grape-growers in distant parts of the country, to whom the grapes have been sent during the last eight years, but I have not deemed it worth while to ask permission to publish their communications to me, and I do not feel at liberty to do it without their consent. These opinions are not quoted to prove that these grapes possess every desired quality of fruit and vine; but only to confirm the belief that they deserve attention and trial.

Notwithstanding these flattering testimonials of the qualities of these fruits, I have not been able to obtain any terms for the propagation and distribution of the vines, except to give them away to nurserymen and others. I was not disposed to do this, and I have propagated some of the best and most promising varieties, in suffi-

cient numbers to supply a few cultivators with an assortment of thirty kinds, embracing the best of different crosses. I do not intend to multiply or propagate them any farther than may be necessary to secure a distribution and trial of them. Several of those last described, promise well,—a few of them appear *very* good—but they have not borne fruit long enough to determine their merits, and I have not propagated many from them.

Such of them as prove good, or worthy of trial elsewhere, will be sent, if desired, at the same rate per vine, to all who now purchase thirty varieties.

If any grape-grower or nurseryman desires to purchase such an assortment of thirty vines, I shall be glad to supply him with them at a very low price, considering their cost to me ; if they are not desired it may excite my regret, but it will do me no harm ; nor, indeed, would it were I to annihilate the whole brood of vines, as I, at times, have been almost tempted to do.

GEORGE HASKELL.

IPSWICH, Mass., Jan., 1877.

DESCRIPTION OF VARIETIES.

- THREE.** Parentage: seed of Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** black, round, very large, skin thin, pulp tender, sweet, flavor excellent, rather late. **Cluster:** very large, shouldered, compact. **Vine:** very vigorous, hardy, very productive, in some localities and seasons slightly affected with mildew.
- THIRTY-SIX.** Parentage: seed of Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** dark red with lilac-colored bloom, round, medium, skin thin, pulp firm, sweet, flavor good, free from foxiness. **Cluster:** large, shouldered, open, of regular form. **Vine:** vigorous, hardy, very healthy and productive.
- SEVENTY-FOUR.** Parentage: seed of Black Fox fertilized with pollen of Black Hamburg. **Fruit:** black with a heavy light-blue bloom, oval, very large, skin thin, pulp tender, sprightly and vinous, flavor good, no foxiness, early. **Cluster:** medium, small shoulders, compact but not crowded, holds the fruit well and keeps late. **Vine:** of medium vigor, short-jointed, hardy, very productive and healthy.
- ONE-EIGHTEEN.** Parentage: seed of Black Fox fertilized with pollen of Black Hamburg. **Fruit:** black, little bloom, round; large, skin thin, pulp very tender, flavor pleasant and sprightly, no foxiness. **Cluster:** medium, not shouldered, open. **Vine:** vigorous, hardy and very healthy.
- TWO-TWENTY-FOUR.** Parentage: seed of Black Hamburg fertilized with pollen of Pigeon. **Fruit:** black, round, medium, skin thin, no pulp, rather tart, colors early but improves by hanging late. **Cluster:** very large, very large shoulders, close but not crowded. **Vine:** very hardy, healthy, vigorous and productive.
- TWO-THIRTY.** Parentage: seed of Black Hamburg fertilized with pollen of Pigeon. **Fruit:** black, round, small, heavy bloom, skin thin, no pulp, tart, colors early but should hang late. **Cluster:** very large and heavy, small shoulders, long and very compact. **Vine:** very healthy, hardy, vigorous and productive.
- TWO-NINETY-FIVE.** Parentage: seed of White Fox fertilized with pollen of White Chasselas. **Fruit:** very light amber or white in the shade, round, large, skin very thin, pulp tender, sweet, flavor good, a little musky. **Cluster:** large, shouldered, compact. **Vine:** vigorous, hardy, healthy and enormously productive, producing clusters from the eyes at the base of the shoot.

THREE-TWENTY-FIVE. Parentage: seed of Amber Fox fertilized with pollen of White Frontignan. **Fruit:** deep red or maroon, with little bloom, oval, medium, skin thin, pulp tender, sweet and rich, flavor good with a very little foxiness. **Cluster:** large, regularly shouldered, close but not crowded. **Vine:** vigorous, very productive, bears the winter perfectly, but is sometimes attacked with mildew.

THREE-EIGHTY-SEVEN. Parentage: seed of Amber Fox fertilized with pollen of White Frontignan. **Fruit:** dark amber, round, medium, skin thin, pulp firm and rather tart, flavor excellent, like Frontignac, and free from foxiness, rather late. **Cluster:** large, shouldered very compact. **Vine:** very vigorous, very healthy and productive.

FOUR-TWENTY. Parentage: seed of Black Hamburg fertilized with pollen of Black Fox. **Fruit:** black with a blue bloom, oval, very large, skin very thick, pulp rather hard and acid, flavor peculiar, spicy and delicious, no foxiness, rather late. **Cluster:** large, irregularly shouldered, broken and open. **Vine:** very vigorous, hardy and healthy.

TWELVE. Parentage: seed of Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** black with blue bloom, round, good size, skin thin, pulp tender and sweet, flavor good, no foxiness, early. **Cluster:** medium, small shoulders, compact. **Vine:** of medium vigor, very hardy and healthy.

ONE-THIRTY-SIX. Parentage: seed of Black Hamburg fertilized with pollen of Black Fox. **Fruit:** black, blue bloom, round, large, skin thick, pulp firm, flavor good, no foxiness, quite late. **Cluster:** large, large shoulders, full, excellent form. **Vine:** vigorous, hardy, healthy and enormously productive.

ONE-EIGHTY-FOUR. Parentage: seed of the Grizzly Frontignan fertilized with pollen of Pigeon. **Fruit:** black, round, medium, skin thin, no pulp, quite sweet, Frontignan flavor. **Cluster:** long and without shoulders, pretty close. **Vine:** vigorous, productive, hardy and generally healthy.

TWO-SIXTY-SEVEN. Parentage: seed of Pigeon fertilized with pollen of Black Hamburg. **Fruit:** black, round, medium, skin thin, pulp tender, brisk and pretty good. **Cluster:** medium, shouldered, well formed, rather open. **Vine:** healthy, vigorous, hardy and productive.

THREE-HUNDRED-NINE. Parentage: seed of Amber Fox fertilized with pollen of White Chasselas. **Fruit:** dark amber, slightly oval, medium, skin thin, pulp tender, excellent flavor, no foxiness, early. **Cluster:** good size, small shoulders, open. **Vine:** vigorous, hardy, very healthy and productive.

THREE-FORTY-THREE. Parentage: seed of Amber Fox fertilized with pollen of White Frontignan. **Fruit:** black, round, large, skin thin, pulp tender, flavor good, rather late. **Cluster:** very large, shouldered, compact but not crowded. **Vine:** very vigorous, hardy and productive, generally healthy. The only black grape obtained from many crosses of the Frontignan and Fox.

THREE-SIXTY-SIX. Parentage: seed of small Amber Fox fertilized with pollen of White Frontignan. **Fruit:** purple, heavy bloom, round, medium, skin thin, pulp tender, flavor strong of the Frontignan. **Cluster:** medium, small shoulders, compact. **Vine:** very vigorous, hardy, healthy and productive. Young foliage very downy.

THREE-SIXTY-NINE. Parentage: seed of small Amber Fox fertilized with pollen of White Frontignan. **Fruit:** red, round, rather small, skin thin, pulp tender, sweet, excellent Frontignan flavor and very early. **Cluster:** medium, not shouldered nor crowded, regular in form. **Vine:** not very vigorous, hardy, very healthy, and moderately productive.

THREE-SEVENTY-ONE. Parentage: seed of small Amber Fox fertilized with pollen of White Frontignan. **Fruit:** dark red, round, small, skin thin, pulp firm, with a strong Frontignac flavor, early. **Cluster:** medium, not shouldered, very compact. **Vine:** vigorous, hardy, very healthy and productive.

FOUR-EIGHTEEN. Parentage: seed of Black Hamburg fertilized with pollen of Black Fox. **Fruit:** amber, slightly oval, large, skin rather thick, light bloom, pulp tender, sweet and good, with foreign flavor. **Cluster:** large, shouldered, very regular in form, compact. **Vine:** very healthy, very hardy, vigorous and productive.

ONE-TWENTY-TWO. Parentage: seed of early Black Fox fertilized with pollen of Black Hamburg. **Fruit:** black with a bloom, round, large, skin thin, pulp tender, red and quite good, very early. **Cluster:** medium, small shoulders, rather open. **Vine:** of moderate vigor, hardy, moderately productive.

THREE-SEVENTEEN. Parentage: seed of large Amber Fox fertilized with pollen of White Chasselas. **Fruit:** amber, oval, large, skin thin, pulp tender. **Cluster:** large, shouldered, not very compact, of regular form. **Vine:** vigorous, hardy, healthy and very productive.

THREE-THIRTY-FOUR. Parentage: seed of large Amber Fox fertilized with pollen of White Frontignan. **Fruit:** nearly white, round, large, skin thin, pulp tender, sweet and good flavor. **Cluster:** medium, small shoulders, open. **Vine:** vigorous, hardy, and productive, foliage downy.

THREE-SIXTY-SEVEN. Parentage: seed of small Amber Fox fertilized with pollen of White Frontignan. **Fruit:** nearly white, round, large, skin thin, pulp tender, high Frontignan flavor. **Cluster:** long, without shoulders, rather open. **Vine:** vigorous, hardy, productive, a little subject to mildew.

THREE-SEVENTY-THREE. Parentage: seed of small Amber Fox fertilized with pollen of White Frontignan. **Fruit:** white or light amber, round, large, skin thin, pulp tender, excellent Frontignan flavor. **Cluster:** large, large shoulders, not very close. **Vine:** of medium vigor, very hardy, healthy and productive.

ONE-SIXTY-NINE. Parentage: seed of Pigeon fertilized with pollen of Grizzly Frontignan. **Fruit:** black, round, small, skin thin, no pulp, rather tart, early, should hang late. **Cluster:** medium, shouldered, not very compact. **Vine:** very hardy and healthy, moderately productive but vigorous.

ONE-EIGHTY-EIGHT. Parentage: seed of Grizzly Frontignan fertilized with pollen of Pigeon. **Fruit:** black, round, small, skin thin, blue bloom, no pulp, rather tart, juice red. **Cluster:** large, very long, small shoulders, very compact. **Vine:** very vigorous, hardy, healthy and very productive.

TWO-TWENTY-NINE. Parentage: seed of Black Hamburg fertilized with pollen of Pigeon. **Fruit:** black, round, large, skin thin, no pulp, juice red and rather tart, should hang late. **Cluster:** very large, broad and long, compact. **Vine:** very vigorous, healthy and hardy, very productive.

THREE-TWENTY-FOUR. Parentage: seed of Amber Fox fertilized with pollen of White Frontignan. **Fruit:** white, round, large, skin thin, pulp very tender, flavor good and free from foxiness. **Cluster:** very large, shouldered, full but not crowded. **Vine:** vigorous, hardy, healthy and productive.

THREE-FORTY. Parentage: seed of large Amber Fox fertilized with pollen of White Frontignan. **Fruit:** nearly white, round, large, skin thin, pulp tender, excellent flavor, no foxiness. **Cluster:** very long, without shoulders, close but not crowded. **Vine:** vigorous, hardy and productive, sometimes and to a small degree affected with mildew.

NINETEEN. Parentage: seed of small Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** black, little bloom, round, small, skin thin, pulp tender and slightly acid, quite early. **Cluster:** medium, shouldered, very compact. **Vine:** vigorous, hardy, very productive and healthy.

SIXTY-FOUR. Parentage: seed of small Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** red, round, small, skin

- thin, pulp tender, very good flavor. **Cluster:** small, shouldered, open. **Vine:** very vigorous and healthy, hardy, not very productive.
- THREE HUNDRED.** **Parentage:** seed of Amber Fox fertilized with pollen of White Chasselas. **Fruit:** white or very light amber-round, large, skin thin, flavor good, early. **Cluster:** large, shouldered, compact. **Vine:** vigorous, hardy, very healthy and productive.
- THREE-HUNDRED-SIX.** **Parentage:** seed of large Amber Fox fertilized with pollen of White Chasselas. **Fruit:** light amber, round, small, skin thin, pulp tender, very good and very early. **Cluster:** small, slight shoulders, compact. **Vine:** medium vigor, small firm wood, hardy, moderately productive.
- THREE-FORTY-TWO.** **Parentage:** seed of large Amber Fox fertilized with pollen of White Frontignan. **Fruit:** nearly white, round, large, skin thin, pulp tender, sweet and good, flavor good. **Cluster:** medium, shouldered, compact. **Vine:** vigorous, hardy, healthy and very productive.
- THIRTY-FIVE.** **Parentage:** seed of small Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** light amber, round, medium, skin thin, pulp tender and sweet. **Cluster:** medium, small shoulders, open. **Vine:** very vigorous, healthy and productive, wood rather soft and tender.
- FIFTY-EIGHT.** **Parentage:** seed of small Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** red, small, round, skin thin, little pulp, sweet and very early. **Cluster:** small, sets irregularly, open. **Vine:** vigorous, very healthy and hardy.
- SEVENTY-FIVE.** **Parentage:** seed of Black Fox fertilized with pollen of Black Hamburg. **Fruit:** black, blue bloom, round, large, skin thick, pulp tender, sprightly, flavor good, not foxy, early. **Cluster:** large, large shoulders, full, holds the fruit late. **Vine:** very vigorous, very hardy, healthy and productive.
- NINETY-FIVE.** **Parentage:** seed of large Amber Fox fertilized with pollen of Black Hamburg. **Fruit:** amber, round, large, pulp very tender and tart, flavor very good, not foxy, early. **Cluster:** medium, without shoulders, open, irregular. **Vine:** medium vigor, very hardy and healthy, moderately productive.
- ONE-TWENTY-EIGHT.** **Parentage:** seed of very early Black Fox fertilized with pollen of Black Hamburg. **Fruit:** light amber, medium, round, skin thin, pulp tender, sweet, of excellent flavor, early. **Cluster:** medium, small shoulders. **Vine:** rather feeble grower, very hardy and healthy, shy bearer.

I have thought that one hundred dollars would not be an unreasonable price, for thirty varieties as herein mentioned, considering their quality, and that the purchaser will have and enjoy all the best products and advantage of my long-continued and expensive labor, without any restriction or hindrance in the propagation and sale of the vines.

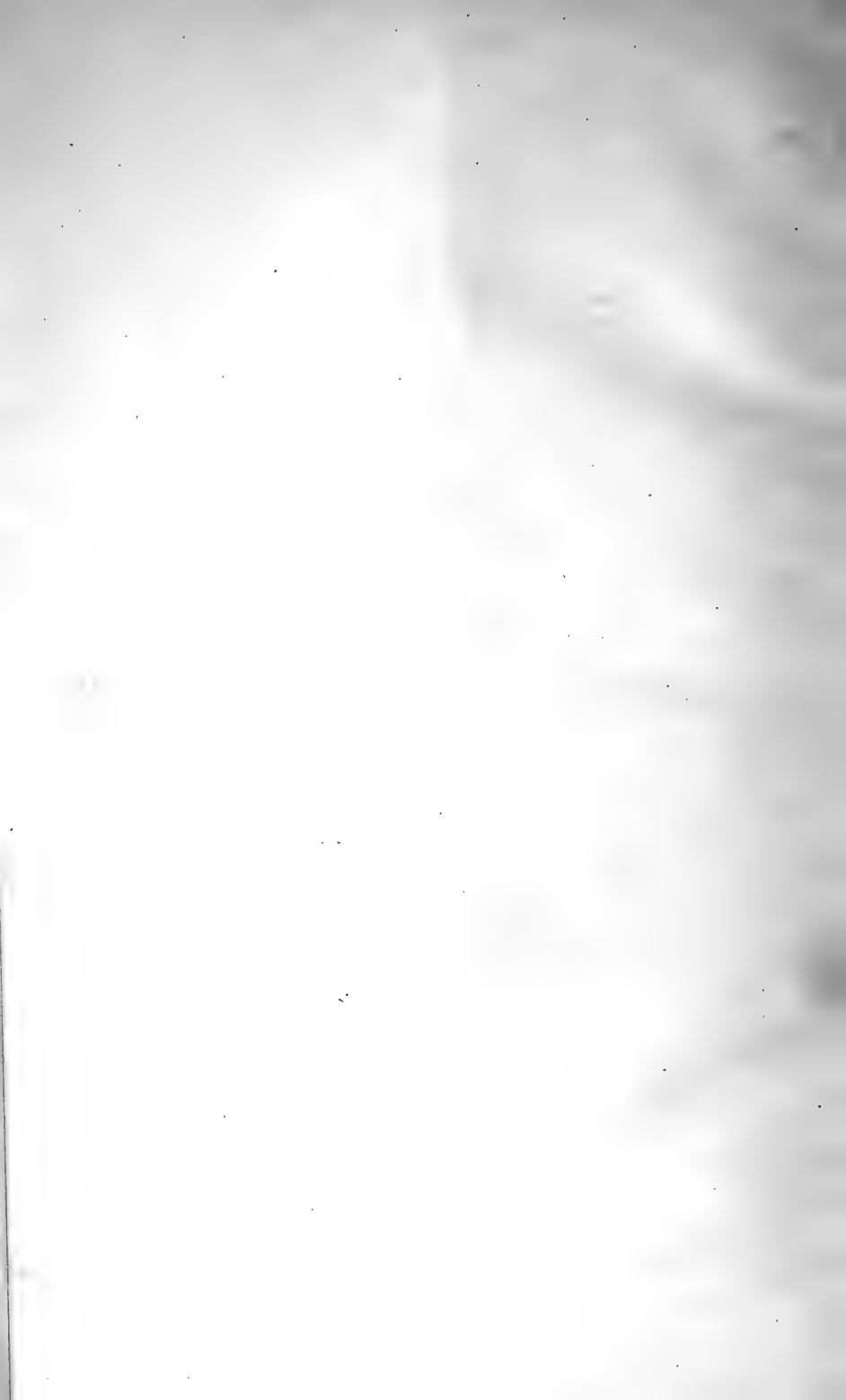
For that sum I will mark, pack well, and deliver at any express office in Boston, thirty vines of different kinds. For northern locations, a few of those of latest maturity had better be omitted and some of the earlier on the list be taken instead; and for southern locations some of the later kinds would be better than the earlier. Thirty of the kinds described, best adapted to the location of the buyer, will be sent if no request for others is made.

Most of the vines are two or three years old, but a few are only one year from cuttings.

GEORGE HASKELL.

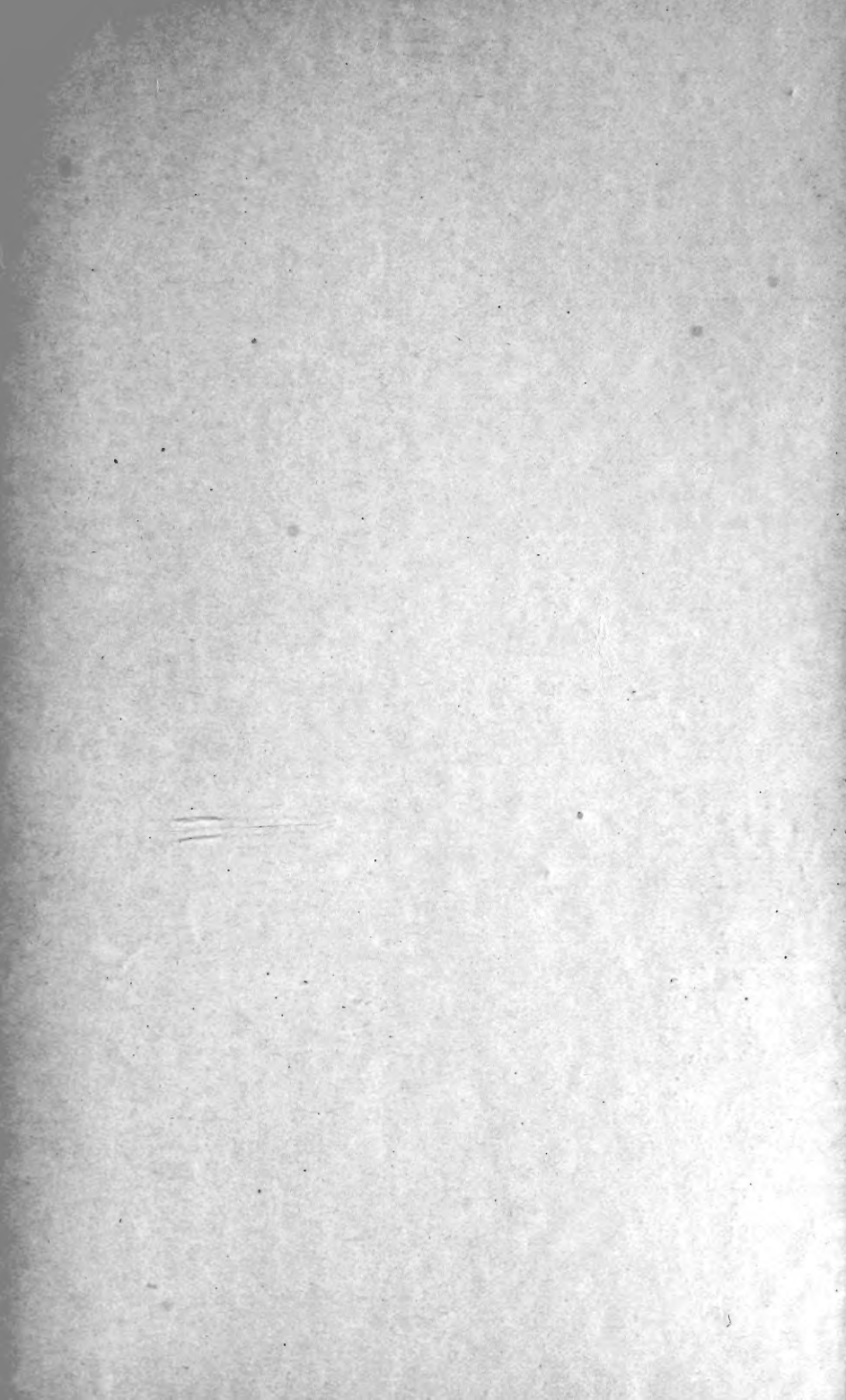
IPSWICH, Mass.











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