

THE AMERICAN GRAPE INDUSTRY.

A Great and Increasing Branch of Horticulture.

GUY ELLIOTT MITCHELL.

"The grape is the poor man's fruit, especially one who has only a house lot of the smallest possible dimensions. He can plant vines beside his cottage and their roots will extend and profitably occupy every inch of ground underneath it and from that small space produce all the fruit his family can consume, while the vines afford shade and protection and add beauty to his little home, occupying no space, either above or below the ground to interfere with other interests, and producing more fruit in less time and with less labor and attention than anything that was ever planted."

All of which is charming in truth unless the phylloxera or the downy mildew or the aphid or the dry rot become appendages to vine, or the chickens or small boys of the neighborhood steal all the grapes just as they are getting ripe.

Chickens, however, should be kept in pens, and if every small boy's father had a grape vine which furnished "all the fruit his family could consume," there would be no incentive to pillage the neighbor's vines.

As for the downy mildew and the other ailments to which civilized grape

30,000,000, Ohio third with 14,000,000 and Kansas, Michigan, Pennsylvania, Missouri, Oklahoma, Illinois, Indiana, Georgia and Iowa with 5,000,000 or less each. California alone had a quarter of a million acres in vineyards with an annual production of 30,000,000 gallons of wine. The investment represented in that State alone is estimated at \$85,000,000.

Wine Tank as Big as a House.

The writer once climbed to the top of a single cask at Fresno, California, which contained 96,000 gallons of port wine. There are hundreds of casks throughout the State with a capacity of 50,000 gallons each. The annual raisin production of California amounts to about 90,000,000 pounds, while about 25,000,000 pounds of these raisin grapes are shipped East every year as table grapes.

Last year the Chautauqua district in New York produced 600,000 gallons of unfermented grape juice.

These figures give some idea of our

Increasing Wealth in the West.

In commenting on the need which has hitherto manifested itself in the West for calling upon Eastern money centers for funds with which to move Western crops, a new York financial letter states that with conditions as they were ten years ago, the present record-breaking crop would have strained the capacity of the New York financial centers to the utmost to furnish sufficient funds. So greatly, however, has the wealth of the West increased and so large are the surplus reserves of the farmers that even with crops so stupendous as to amaze Europe, New York financiers have been hardly inconvenienced by the demands for funds. In a not distant future it is predicted the West of the Mississippi Valley and of the Missouri Valley as well will be found exclusively lending



SCUPPERNONG WINERY, NORTH CAROLINA.

or advancing money with which to move the crops that are grown in the remoter regions of the Southwest or the distant Northwest.

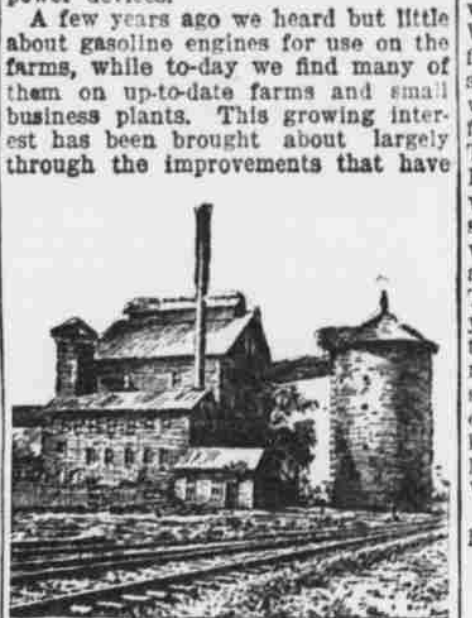
No expert can estimate accurately the gains that will come this year to the farmers, the surplus that will be left for them after paying expenses, which represents their profits. Some of the most experienced experts have ventured to estimate that the farmers of the United States this year as a whole will find themselves to the good by not less than \$300,000,000, and possibly \$400,000,000. These are the gains as well as those which the great transportation companies expect to receive for carrying the agricultural products from the harvest fields to the market to which Mr. Vanderbilt referred in his address to the National Bankers' Association at Washington. The United States as a whole ought to be richer by reason of the year's industry, agricultural and manufacturing and transportation, by an amount considerably in excess of a thousand millions.

GASOLINE POWER ENGINES.

Constitutes Great Saving in Horse and Man Power—Have Come Into General Use on Many Prosperous Farms and Homes.

Inexpensive, reliable power on the farm and around the home is becoming more and more desirable these days when unskilled labor is so high and hard to procure. Gasoline engines, which when started practically take care of themselves, are rapidly supplanting steam engines and horse power, the operation of which requires constant attention. The difference in the cost of operating and the advantage of starting at a moment's notice has advanced the popularity of gasoline engines where comparatively small power is required in contrast with other power devices.

A few years ago we heard but little about gasoline engines for use on the farms, while to-day we find many of them on up-to-date farms and small business plants. This growing interest has been brought about largely through the improvements that have



A GRAPE BY-PRODUCT FACTORY.

been made by manufacturers during late years in simplifying the working parts of the engines so that the average man can operate them with the ease of an expert. As a matter of fact, a bright boy can handle a modern gasoline engine with but little teaching. Take the farmer who has never seen a gasoline engine and let him start and stop one a few times and study some of the principles of operating it and in a few days he will become as familiar with its workings as he would with a team of horses or a tread-mill. The general usefulness of a machine of this sort on a farm is apparent. There is ensilage to cut, wood to saw, feed to grind, corn to shell, water to pump, in fact a multitude of things that can be done with a gasoline engine at small expense.

CHICKENS AS GARDENERS.

Can Be Taught to Pull Weeds and Harvest Grain.

"I see as how a scientific professor has trained a yaller dog to count ten an' answer fool questions," said the hired man to the tourist. "Wy that ain't nothin' I knows an old feller back yere in th' Valley what beats that all to flinders. Began raisin' chickens when he was a boy. I seen some bantams he had no bigger'n fleas an' game birds what e'd step over a six-foot fence. But that ain't nothin'. Last time I was down 't his place he had a hunder-acre farm an' 'bout ten thousand chickens, an' was raisin' truck for early northern markets. Powerful big chickens they was, an' he had 'em trained so's they'd work his farm for him. They wasn't a weed nor a blade o' grass in that whole farm 'cep'n in the pastures. An' bugs? wy they e'dn't a tater bug, nor a cut worm, nor even a cabbage flea get a foot 'inside o' that farm afore a chicken had 'im. An' that wasn't all. Them chickens e'd see at night. Gues he must a' crossed 'em with owls. Anyways, he never worried none 'bout early frost. If 'twas cold in the spring them chickens was out all night coverin' up tomatoes an' beans an' ev'rythin' tender. Jest squat over an' set there till sun up. He had tomatoes three weeks ahead o' anybody else. An' that wasn't all. When he planted his beets en turnips en passinjs he sowed 'em powerful thick an' as soon as they'd get up 'bout right size them chickens come along an' thin 'em out jest right. Fine eatin' for 'em, too. An' 'tween times they was going up an' down the rows all day long scratchin' up the dirt an' keepin' ev'rythin' cultivated jest perfect. Wy that feller never had a hoe in his han' from one year end to another. An' 'lay! Gee whiz! Them hens was the stiddest layers I ever see. But they didn't use no nests. Jest laid in reg'lar egg crates. An'



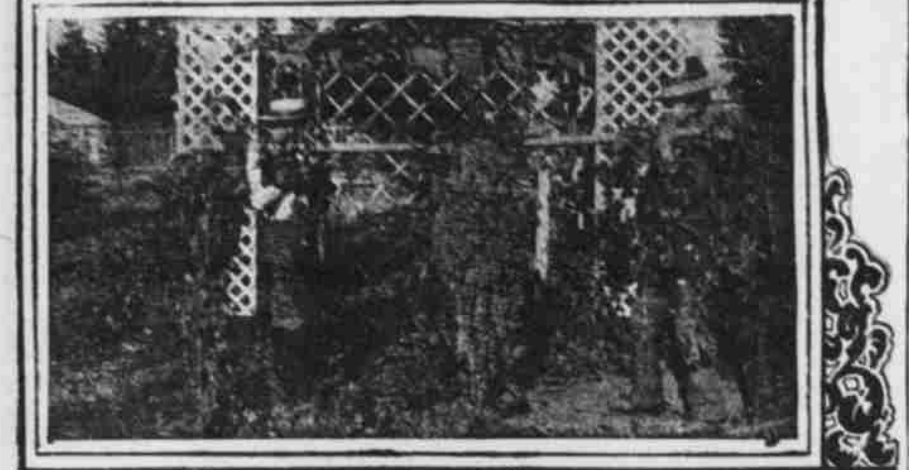
fast as one layer was full the hens in charge o' the layin' house 'd grab up a new frame an' drop it in the crate. I see 'em fill sixty-odd crates o' eggs in one forenoon.

"But that ain't nothin'! Them hens was so big an' powerful they e'd do almost as much as a hired man. I see a wagon full o' seed wheat come along past his house. An' there was a little hole in the wagon an' the wheat was a runnin' out all along the road. Well, sir, that feller jest drove 'bout five hundred chickens out in the road and put down a lot o' sacks an' they went to pickin' up that seed wheat faster'n you or I e'd pick up taters. They gathered up 'bout forty bushel in the sacks? Wy of course they was these roosters a holdin' each sack, an' when a sack was full they'd whip a tie 'round the neck, set it up agin the fence an' grab up another. They was sich big powerful chickens, you know. An' that wasn't all neither. He had some whoppin' big roosters, an' he sharpened up their spurs in the fall an' had 'em cuttin' corn better'n you or I e'd with a corn-knife, an' stackin' it up jest as regular. But shucks! that wasn't nothin'. Wy I see that feller—"

But as he looked around the tourist had fled in horror.

Chinese "Cash."

Consular reports from China are to the effect that the prospect of a reform or rather revolution in the money system of that Empire is not very bright. In spite of the promises to that end which have been made. There are a number of influential elements preventing the change which nations do by the great variations in values of the same kind of coins in different cities as well as the provincial officials who mint them. The money of the people is still brass and copper, and to introduce a new system will be difficult owing to the dread on the part of the public of anything new. Gold and silver may continue to control the price paid for exports, but copper and brass will for a long time govern production.



Seedless Grapes From One Vine

Largest Grape Vine in the World, Santa Barbara California.

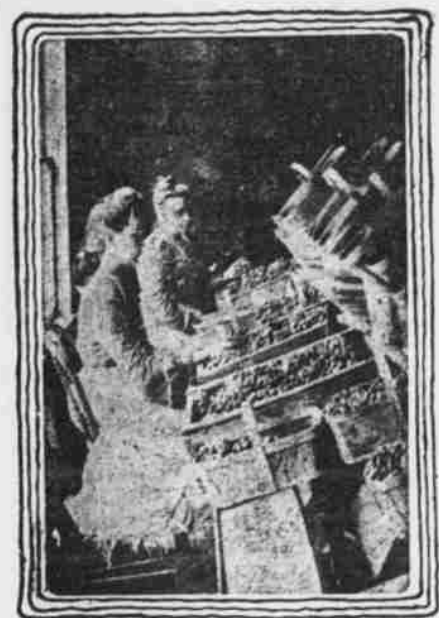


vines are heir, horticultural investigations have shown that they can be combated with comparative ease by spraying, and not only prevented but the vine stimulated to even greater than normal production.

As a matter of fact, the grape industry in the United States when considered both as a large commercial proposition and as one where each man has his own vine, if not fig tree, is one of a great deal of importance and of great interest.

Count Their Age by Centuries.

Although the product of its fruit is accountable for much that is unseemly an' frivolous, the vine is itself an object of great age and dignity. It is not known how old the grape will grow in America, since we have not been here long enough to make the test, even had a vine been planted with the landing of Columbus. Pliny mentions an Old World grape vine 600 years of age. Some entire vineyards in Italy held good for 300 years and others in Burgundy produced for 400 years and more.



PACKING CONCORD GRAPES, LAKE KEUKA, NEW YORK.

These were cultivated vines. Doubtless native vines grow to much greater age.

The viticulturist of the Department of Agriculture, George C. Husmann, states that he has never seen a vine among the endless number of natives abounding in our forests that has died from the effects of age. Some old grape vines grow to immense size. There is a wild grape vine on the shores of Mobile Bay under which Andrew Jackson twice pitched his tent in his campaigns against the Seminoles, which has a circumference of over six feet, with a supposed age of about 100 years.

The Size of a Great Tree.

The largest known grape vine in the world was planted in California in 1842. It has made a phenomenal growth. Beneath its spreading branches, which cover nearly half an acre, 800 persons can find protection from the sun's heat. It bears from six to ten tons of grapes for a crop and the circumference of its trunk is eight feet.

While the wine industry is by far the most important feature of grape growing, enormous quantities of table grapes are raised and by means of improved transportation facilities sent to all parts of the country. The Concord, the Delaware and the Niagaras come from the North, the Scuppernon from the South and the Flame Tokays and other sugary raisin grapes from the Pacific coast.

The last census reported 12 States having in bearing over 2,000,000 vines each, California being first with 90,000,000 vines, New York second with

grape industry, which, while it is only about 50 years old, is small as compared to that of the world whose annual production is over 4,000,000,000 gallons of wine.

Other products of the grape are raisins—an enormous industry in itself—brandy, vinegar, grape syrup, a very superior article, and various pickles, jellies and preserves.

The grape furnishes also important by-products. Feed and fertilizer are produced from the pomace, also acetic acid. The seeds are separated from the pomace and fed to stock the same as grain. Ground up, they are used as a substitute for coffee. A high grade oil similar to olive oil is also produced from the seeds, which, among other things, make superior soap. They also yield tannin.

Mr. Husmann estimates that if all the wastes of the grape crop were utilized extra returns would increase its value fully 10 per cent., which, with our present grape production to the value of about \$15,000,000, would mean an additional earning of a million and a half, and this with our viticultural industry as yet in its infancy.

Feeding Oleo to the Navy.

Considerable of a sensation has developed over the furnishing to League Island navy yard, Philadelphia, of butter which analysis has proven to be simply oleomargarine colored with coal tar dye. Samples were taken from the government receiving ship Lancaster, several battle ships and cruisers and from the hospitals of the navy yard by agents of the Pennsylvania Dairy and Food Commission. Dr. Warren, the State Commissioner, declared them to be specimens of coal tar oleo and after considerable controversy, at the instance of President Roosevelt, they were finally submitted to Dr. Wiley, the chief chemist of the Department of Agriculture, who in a full report has sustained Dr. Warren's findings. Secretary Wilson has referred the report to the President, who has, it is stated, called the attention of the Department of Justice to the matter. Several arrests have already been made.

In speaking, however, of the substitution of oleomargarine for butter in the market, Dr. Wiley said that at present the amount of oleomargarine sold in this country whether fraudulently as butter or when marked as oleo is quite small. The government has rendered the making and sale of the stuff unprofitable by levying 10 cents a pound on all that is artificially colored, and half a cent on the uncolored.

Foreigners Refuse Colored Butters.

"Coal tar dyes," said Dr. Wiley, "are not fatally harmful, though by no means wholesome, and dairymen are permitted under the law to use such coloring matter to impart to their butter a rich yellow color. To render this unnecessary, the Department of Agriculture is now trying to educate the popular taste in favor of uncolored butter, and we are making some headway. Over in Europe one never encounters colored butter in any of the hotels or first class markets. The people there have learned to distrust it. We are coming to this in the United States. Today first-class hotels and fancy groceries will not buy butter that has a high color. Our epicures and those that live well are also fighting shy of it, and as a result the dairymen are beginning to realize that the bottle of coal tar dye is no longer a necessary adjunct to a successful dairy."

John Adams was the author of the motto, "E Pluribus Unum."



NO OTHER WAGONS APPROACH

In Perfect Adaptability Under all Conditions to

The Strong Old Hickory

MANUFACTURED BY
Kentucky Wagon Manufacturing Co.
LOUISVILLE, KY.
LARGEST PRODUCERS OF FARM WAGONS IN THE WORLD

Kirk's

AMERICAN CROWN
SOAP

A Quarter of a Century of unfailing service

proves the
ABSOLUTE RELIABILITY
of the
Remington
TYPEWRITER

WYKOFF, SEAMANS & BENEDIOT
267 BROADWAY, NEW YORK

James S. Kirk & Company
CHICAGO, ILL.

BOOKS—BOOKS

We have published some good ones especially suited for farmers. Books that will help every farmer to make more out of his farm. Write for our catalogue.

WEBB PUBLISHING CO.,
St. Paul Minn.

Well Drilling Machines

Over 70 sizes and styles for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily.

SEND FOR CATALOGUE
WILLIAM BROS., Ithaca, N. Y.

Marlin Repeaters

are the original solid top and side ejectors. This feature forms a solid shield of metal between the shooter's head and the cartridge at all times, throws the empty away from him instead of into his face, prevents smoke and gas from entering his eyes and lungs, and keeps the line of sight unobstructed. The MARLIN action works easily and smoothly, making very little noise. Our new automatic recoil-operating locking device makes the Marlin the safest breech-loading gun ever built. See our catalogue, 300 illustrations, cover in nine colors, mailed for three stamps.

The Marlin Fire Arms Co.
New Haven, Conn.

Send for Catalogue

SANDWICH MFG. CO.,
124 Main Street, Sandwich, Ill.

SILOS

Pine, Fir, Cypress and Yellow Pine.
Write for Catalogue.

Eagle Tank Co., 281 N. Green St., Chicago, Ill.

IF YOU WANT A JACK

Send for our Jack Catalogue. Sure to contain the description of exactly what you want

Hydraulic Jacks our Specialty

Watson-Stillman Co.,
46 Dey St., N. Y. City.

The Missoula Nursery

Producers of Northern grown acclimated trees and the best varieties for planting in Northern States.

Every Variety of Standard Fruit

Thoroughly tested Apples, Pears, Plums, Cherries and Trees Ornamental, Small Fruit Plants, Shrubs, Vines and Roses.

THE EVERBEARING STRAWBERRY

A SPECIALTY OF
FLOWERING PLANTS AND SHRUBS

Cut Flowers and Floral Designs. Also Vegetable Plants shipped by express. Catalogue and Price List Free. Mail orders have prompt attention.

MISSOULA NURSERY CO.

MISSOULA, MONTANA.