

The Oasis

Vol. I.

ARIZOLA, ARIZONA, THURSDAY, SEPTEMBER 14, 1893.

No. 19.

FRUIT DRYING UNDER GLASS.

A Los Angeles correspondent of the San Francisco Call tells of a new device for drying fruit under glass or thin cotton cloth, which he says was originated by C. J. Calkins, of Los Angeles, who, however, claims no patent upon his idea.

Glass cases about six feet in surface measurement and about eight inches in depth are provided for the fruit, which is laid on two trays. The trays are placed on rollers in such a way that they may be inclined toward the sun's rays as the sun changes.

Mr. Calkins' experiments prove that the glass cases conserve the heat of the sun to a considerable extent and increase its intensity almost two-fold. When the normal temperature is 60 deg. the sun shining on these glass cases increases the interior temperature to 80 deg. And the rate of increased interior temperature is cumulative, so that an outside temperature of say 100 deg. would make a temperature inside the glass of fully or more than 150 deg.

Though the glass cases are more expensive than the dry mother earth, they are not nearly so expensive as the evaporators. Nor do they perform their work as quickly as the evaporator can. But the difference in the cost of the two plants—to say nothing of the fuel necessary for the quick work of the evaporator—more than compensates for the slowness of the glass process.

And the slowness is only relative. Mr. Calkins has proved. It is a far quicker process than that of earth-drying, far cleaner, far safer and surer, and very much cheaper than the evaporator process.

Mr. Calkins says his device is particularly adapted to places where the sunshine is intermittent. During the absence of the sun for a time, at least, the drying process continues under the influences of the heat stored up in the glass cases, and the fruit itself is not subjected to the ravages of worms or to the influences of moisture at night or incipient showers in the daytime.

The danger of burning the fruit under glass cases when the sun is very hot, is obviated by ventilators.

California fruit growers are rapidly coming to the conclusion that if they wish to be in a measure independent of glutted markets and the rapacity of middlemen, they must dry their own fruit, and hold it until advantageous prices are offered. Hitherto, there has been a good deal of trouble about a satisfactory method of drying fruit. Sun-dried fruit needs great care to prevent its becoming dirty or worm infested during the process, while, as to evaporators, no permanently successful machine has yet been found. The method above described appears to form a satisfactory solution of the difficulty. Where growers cannot afford to use glass, they might adopt the cotton cloth, which is almost as effective as glass in storing heat, as any one may discover by spending an hour in a closed tent on a warm summer day.

Curing Figs.

The California State Board of Horticulture has just published, in pamphlet form, a detailed description of the method of preparing figs adopted by George A. Raymond of Miramonte,

Kern county, whose very successful work was recently referred to in these columns. Following is an extract from the pamphlet:

"I have learned two things of great importance by experience. The first is, that the trees must not be irrigated later than six weeks before the fruit ripens. The second is, that as soon as the nights grow cool and there is the least indication of dew, I at once stop curing. In either case, if these rules are not carried out the figs will ferment within a very few months after curing; these rules apply here. I keep my trees as close to the ground as possible, heading out at a foot to eighteen inches. My trees have a very dense foliage, so close that from the outside you can rarely look well into the tree. This, I find, prevents a great deal of sunburn on the fruit, to which the fig is quite liable. My best figs come from the inside. My trees have no so-called first crop. (The White Adriatic has only one crop.) A good thing, as I am satisfied that crop will not cure and keep well. The fruit begins ripening about the middle of August, and is all picked in six weeks or less. This year (1892) I began picking August 12 and finished September 19, just as the first cool nights came on and at that time there was not an average of half a pound of fruit left per tree—a very convenient habit of the trees."

Fruit Shipping.

Arizona Republican.

Considerable attention has been turned of late in the direction of fruit shipping, and the best varieties of grapes and other fruits to grow for this industry. Heretofore a farmer or so-called fruit grower endeavored to get in his little vineyard or orchard just as many varieties as possible. That is all very well for our local pedlars, but when it comes to fruit shipping, sufficient of each variety must be had if any success is to be obtained. Then the question is what varieties shall we plant to fill this demand. California has been in the past and is now conceded to be the "grape country" of the United States, and today that industry is far in advance in quantity over any other section of the country. But Arizona, Salt River valley, is rapidly coming to the front, in this product particularly. Our climate is much better adapted to their growing and preserving, and our soil and atmosphere ripens them from two to four weeks earlier. For an early grape here, as there, the Sweetwater and seedless are perhaps the best; the latter however is more of a home grape and used for home preserving.

The next grape that ripens and is a shipper is the Lady Downing which is much larger and juicier than in California, and of course comes earlier than them. But by far the best shipper of any is the Black Mower grape that has been ripening here for the last two weeks. The Black Mower grape also grows better here than in the Golden state, and is a better shipper, sells better, and will demand a better price than any other grape, and furthermore is a sure crop. Wellington Richins of Mesa, has a patch of these grapes, and his vines are loaded, and he says they have not had an off year since he planted, and will grow with less water than any other grapes. The Rose of Peru, the Em-

peror and the Flaming Tokay are also good growers and shippers. L. B. Johnson of Mesa has been engaged in the fruit business this spring, and has shipped over 7,500 pounds of grapes, and has realized from 5 to 7 cents per pound, netting him about \$2.50 per hundred.

The Forage Wonder.

New Mexican.

The American Agriculturist for this month contains an article detailing in full the success which Prof. Paul Wagner, of the agricultural experiment station at Darmstadt, Germany, has met with in producing a valuable forage plant from the wild pea of Hungary. The New Mexican was the first western newspaper to lay the result of Prof. Wagner's experiments in this direction before its readers, and it is gratified to note the attention the subject is receiving from American agriculturists generally.

As has been stated this wild pea grows prolifically in every part of New Mexico and no doubt the seed pods of this, if gathered when ripe, could be utilized for producing here the same wonderful article of forage that is enlisting so much attention now in Germany.

Among the extraordinary features which Prof. Wagner found this plant (*Lathyrus Silvestris*) to possess may be noted, in addition to what has already been said of it in these columns, the fact that it appears earlier in the spring and remains green later in the fall than alfalfa; possesses much greater nutritive value than alfalfa; thrives on the poorest soil without water; plants a year old send their roots down six feet, and older plants have been seen with thirty feet of root. The plant also reproduces its self at a remarkable rate, sending up fresh shoots from the crown of the roots, and on a plant three years old, the stalks being 6 feet in length, have been counted eighty-seven stalks springing from the crown root. These features are certainly sufficient to attract a great deal of attention, to this new forage wonder from the farmers of the arid west.

Prehistoric Irrigation in Arizona.

In the July Anthropologist, Mr. F. W. Hodge gives some interesting notes on this subject, from which we take the following:

In none of the extensive archaeological remains of Southern Arizona are the industry, perseverance and degree of advancement of a large pueblo population more faithfully illustrated than in the many works of irrigation that abound in the valleys and on the mountain slopes of this section.

Judging from the remains of extensive ancient works of irrigation, many of which may still be seen passing through tracts cultivated today as well as across densely wooded stretches considerably beyond the present non-irrigated area, it is safe to say that the principal canals constructed and used by the ancient inhabitants of the Salado valley controlled the irrigation of at least 250,000 acres, even without considering the economical methods employed by a primitive people in all its undertakings.

The mode of canal construction employed by these pueblo builders was another indication of their patience and industry. Their canals are mod-

els for the modern farmer to imitate; yet they could be dug in no conceivable manner save by the laborious process of hand excavation with stone or wooden implements, the earth being borne away by means of blankets, baskets, or rude litters. Notwithstanding this, the outlines of at least a hundred and fifty miles of main irrigating ditches may be easily traced, some of which meander southward from the river a distance of fourteen miles.

Unlike ordinary irrigating ditches, these were constructed in such a manner as to control to some extent the depth of the current as well as to prevent waste through seepage. The bed of the canal was about four feet wide, but the sides broadened in their ascent to within four feet of the bank, where a "bench," three feet in width, on each side of the canal had been made. From these benches the banks continued, broadening until they reached the brinks, which were about thirty feet wide. Thus, a main ditch consisted, so to speak, of one watercourse within another; so that if at any time a small current of water only could be supplied at the head-gate, owing perhaps to drouth, the lower and narrower ditch was doubtless always filled sufficiently to supply the towns beyond, while during the rainy season the upper and much broader portion of the great canal would readily accommodate all surplus waters.

Several years ago when the Morrons first settled at Mesa City and began the irrigation and cultivation of the fertile plain about them, they utilized this ancient canal bed for a considerable distance, including that portion encircling the knoll of volcanic tuff mentioned. The writer has been informed by one of the founders of this settlement and builders of the Mesa canal, which is nine miles in length, that the saving to them by using the ancient canal was from \$20,000 to \$25,000.

In tracing the routes once pursued by many of the canals, great depressions—the sites of ancient reservoirs—are observable. The remains of one of these reservoirs, nearly a mile long by about a mile and a half wide, occur on the open plain at the terminus of one of the main canals that formed the source of water supply of Los Muertos, and about three miles southwest therefrom. It is possible that this depression was, in part, at least, a natural sink, deepened by artificial means to serve more fully the purposes of a storage basin of surplus waters from the Los Muertos irrigating system. Every cluster of communal structures in Los Muertos was supplied with a reservoir on a smaller scale than the one just mentioned, a single canal forming both its inlet and outlet. Sometimes a lesser communal dwelling shared with a neighboring structure in the water supply from a single storage basin.

The telephone is now used by deep water divers, a receiver and transmitter combined is affixed to the inside of the helmet near the diver's ear. By a slight turn of his head he can speak into the phone, and he can hear readily from it at all times. Its value in deep-sea work for reporting progress or receiving instructions is clear.

Vehemence without feeling is rant,