at 167° the one-fifth ; and at 194° the two-fifths ; and at 221° Fahrenheit, the four-fifths, or nearly its own weight, while at 248° Fahrenheit, heated air will absorb one and three-fifths its own weight.

Now, put this heated body of air, charged with more than its own weight of moisture, in motion at the rate of 20 miles an hour, or 880 feet per minute, and the reason of evaporating fruit so rapidly is apparent. Every 100 cubic inches of air at 60° Fahrenheit, and 30 inches to the barometer contains about 30 grains of water ; at 212° Fahrenheit, not far from one-fourth of an ounce of water. A drier chamber of the capacity of 225 cubic feet, according to this estimate, will contain at a temperature of 212° Fahrenheit fully 60 pounds of water, 50 pounds of which has been absorbed from the heated fruit. If the circulation is sufficient to empty this chamber every thirty minutes, 150 pounds of water is abstracted and carried away from a drier (full of fruit weighing 803 pounds) every hour, or 750 pounds are carried off in five hours, about the time necessary to evaporate apples or peaches when in good condition.

It will be seen from this that heat alone is not sufficient to produce evaporation. It will not do it, however great, either on the earth or in an evaporator. Stormy winds fulfill the pleasure of the Creator quite as effectively in drying up the surface of the earth after a heavy rain as do the burning rays of the sun. The sun's heat alone on the moist earth would fill the air with a dense, damp vapour, destructive alike to the health of animals and plants. So, in the philosophic drier, the fruit is put in at the bottom of a heated air chamber, where a stream of cold air containing the fortieth part of its weight of moisture is introduced and driven through the fruit at the rate of twenty miles an hour, and out of an "escape," loaded with more than its own weight of moisture. The air in motion, more than the heat, causes the fruit to dry so rapidly ; and the rapidity of the process, and the moisture in which the fruit is enveloped, prevent oxidation or decay, and give the evaporated fruit, when not over-ripe, so much of the colour of fresh fruit. The shorter the time the fruit is in the drier, the more perfectly the oxygen is excluded, and the brighter the colour.

But the colour of the fruit, however strongly it may recommend it to consumers, is by far the least practical benefit in the process of evaporation. The nutritive value of evaporated fruit, in consequence of the chemical changes during the process, is its chief recommendation.

It is still an open question whether the rapid change of starch into grape sugar in the hot-air chamber of a philosophical evaporator may not be attended by the further change of grape into cane sugar, though no actual analysis demonstrating the fact has yet been made.

Crystals of sugar exist often in great abundance on the surface of the well preserved specimens of evaporated peaches and pears, and possibly on apples, though I have not observed it. It certainly takes much less sugar to suitably sweeten evaporated than sun or kiln dried fruit of any kind.—*San Francisco Daily Evening Bulletin, Jan. 30, 1878.*

Directions for Preparing Evaporated Fruits and Vegetables for the Table.

Apples.—For sliced apple pies, soak the apples in cold or tepid water until soft, then use the same as if they had not been dried; when baked you cannot distinguish any difference between the pie and one made *the same* from fresh apples, except that the one made from the evaporated fruit is the richer, and if properly made, contains the most nutriment ; one pound of evaporated apples will make 5½ large pies. For mince pies, fruit cake, fritters, rolypoly puddings, apple butter, etc. Soak in cold or tepid water until soft, then use same as if they had not been dried.

Peaches.—Soak in cold water until soft ; sweeten to taste, the same as you would fresh fruit ; if very ripe before dried, use without cooking ; be careful not to add more water than will be required for dressing ; if you wish to have a cream dressing, use less water ; if not ripe enough before evaporated, stew them after soaking.

Pears.—Soak in cold or warm water until soft, stew in the same water ; if they are sweet pears, they will require but little or no sugar.

Plums.—Prepare same as pears.