

connecting and disconnecting the air ducts, and filling the bunkers with ice after cooling is finished. The California plants use what is known as the "Intermittent Vacuum System," which is covered by Canadian patents. In this system, there is an arrangement of valves in the air ducts, the operation of which is supposed to create a partial vacuum in the car from time to time, but the writer is of the opinion that a direct current of cold air would be quite as effective in cooling the fruit.

Pre-cooling in cars has the advantage that it saves handling, and the fruit is not exposed to changes of temperature, as it is in being transferred from warehouse to cars. With plenty of refrigerating power, a low temperature can be employed in car-cooling to extract the heat rapidly from the fruit. It is quite safe to employ temperatures below the freezing point while the heat is still in the fruit. A pre-cooled car will carry very much farther without being re-iced than one started with warm contents.

The only difficulty in the way of adopting the pre-cooling of cars in Canada is the cost of equipping the necessary plants. This will be prohibitive except in districts where there will be a large number of cars to be cooled.

We must not forget that cold storage or pre-cooling will not do everything, or remove all the difficulties met with in long distance shipment of tender fruit, or in long keeping of the hardier varieties. There has been infinitely greater waste caused by fungus and insect pests than by lack of cold storage, and there is much improvement yet to be made through the exercise of greater care in preventing injuries, such as skin punctures and bruises.

## Picking and Packing Pears

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BY way of making conversation, I once said to a man with whom I was talking: "How would you go about picking and shipping a lot of pears?"

He looked at me in surprise for a minute, then replied: "Why, I'd pick them or shake them down; then I'd put them into barrels, nail the head down good and tight, and send them to the nearest market. How else would anyone do it?" I laughed and changed the subject, for I did not have time to go into details just then; but I thought that he surely must be an Irishman, and only accustomed to growing "apples of the earth," as the French call potatoes.

There is no fruit which requires more careful handling in every particular than the pear. In the first place I always instruct my men how to pick, for I have often seen the fruit pulled from the branch and tossed into the basket. This is almost as bad as the Irishman's way of shaking the tree.

Pears should always be turned up, instead of pulled off, and then laid carefully into the basket; for a pear is much easier bruised than an apple, and being very juicy will start to rot much more quickly.

### WHEN TO PICK.

Perhaps one of the most difficult things in the handling of pears is to know just when to pick them. It is said that you can tell by turning a pear up, and if it parts readily from the branch it is ready to pick; but I have found that this is not always correct, for some varieties, if left until then, would be too ripe for shipping. In order to reach the market in good con-

dition, a pear must be picked green. This is especially true when shipping in barrels, for pears ripen more quickly in barrels than in small ventilated packages.

It would be very difficult to give an infallible rule with regard to the correct time of picking pears. Some varieties need to be picked much greener than others. Experience is the best teacher on that point. In our orchards we judge a good many of the earlier varieties by their changing from a dark green to a lighter shade, but I know this is a very indefinite rule, and one would hardly become an expert in one season. Winter pears may be left on the tree as long as there is no danger of frost.

### BARREL PACKING

While picking is in progress, when the baskets are full, they are emptied into bushel boxes made of slats. It is a good idea to plane off the sharp edges of these slats before making the boxes up in order to prevent the pears from being cut by them.

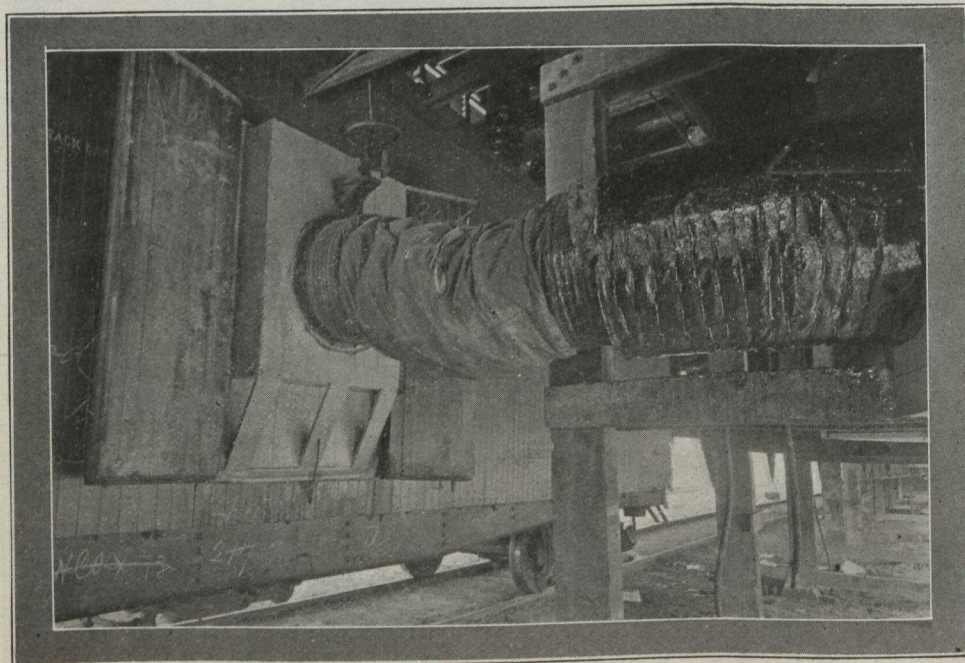
As soon as a load is ready, I draw it into the packing house and unload it, but I let the pears remain in the boxes until they cool off. If pears are packed as soon as they are picked, they will sweat. This will cause them to ripen far more quickly than they otherwise would.

Later, they are emptied on the table and sorted into three grades. The different grades are then put into barrels, boxes or baskets, according to the market to which they are to be shipped. A market where the fruit is all consumed at home usually calls for the smaller packages, while a market which re-ships to smaller points generally prefers the three-bushel barrel.

### BARREL PICKING

In facing a barrel, pick out pears of uniform size, avoiding extra large ones, as these would spoil the appearance of the barrel when opened. Starting at the outside edge, lay the pear on its side, with the stem pointing to the centre, and continue in this way until the barrel is faced. Empty the pears in carefully out of the baskets, and shake the barrel gently every few minutes. When heading up the barrel, do not press as tightly as for apples. The pear is a firmer fruit than the apple, and will not give quite as much.

With regard to the grading of pears, it is very important that each grade should be as much as possible of uniform size, for if a few large ones are put into a barrel marked No. 1, it gives the buyer the impression that the pears are not a good sample, the large ones making the others look smaller by comparison.



Cooling a Car, Showing the Method of Attaching the Cold Air Blast to the Car