

HARVEST AND POST HARVEST HANDLING OF CITRUS FRUITS



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Picking of oranges and citrus in general is for the most part done by hand from ladders.

Efforts at mechanization are being engineered, but none are in general use.

Most equipment is experimental



Picking bag which is supported on a pack frame





An orange-picker using a pack frame picking-bag where the picker is high on a 15' ladder

**Picking bag being
dumped**





**Citrus picker called an autopicker.
Many attempts are being made to make
the harvesting of fruit easier and less costly.**

A close set grove with a large truck passing between rows of trees.

These large trees have been hedged to allow for passage of trucks and here show the need for another hedging.

Usually these drive rows are spaced every 4th or 6th row.

The pickers carry the fruit in bags to the drive roads where the fruit is placed in boxes.





**Loading of field boxes on to the truck
for hauling to the packing plant**



The forklift is removing the loaded bins



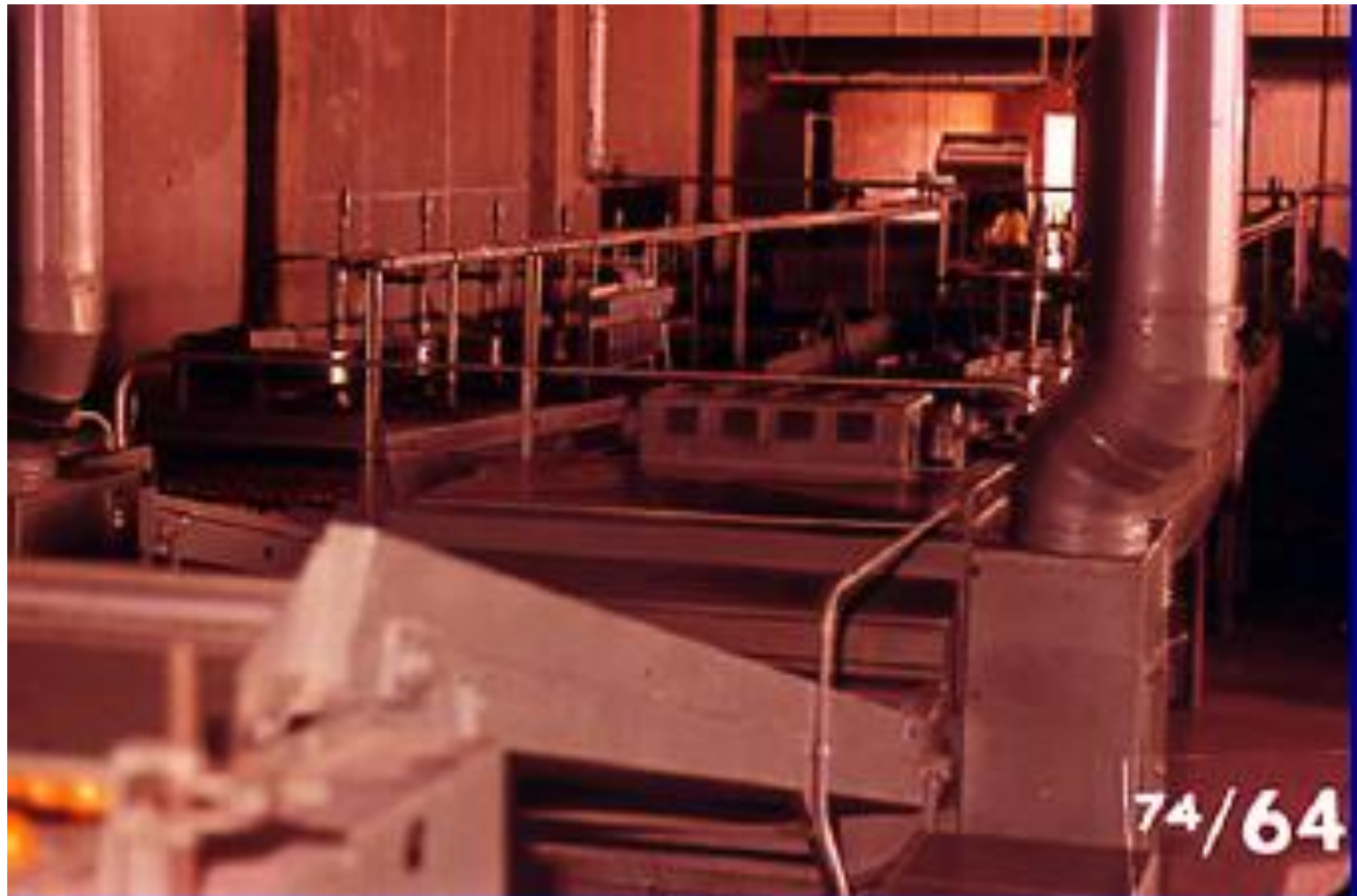
A forklift is placing bins on a track where they are automatically dumped at the beginning of the processing line



The bins are dumped onto a conveyor belt where the leaves, dirt, and branches fall through prior to the fruit going to the first size grader



Grading for size prior to washing



Equipment used in washing, drying, and waxing



Fruit on the conveyer as it comes out of the washer and waxer on its way to be stamped and graded for size



The printing machine which stamps "Sunkist" on each fruit as it passes under the rollers



Sizing equipment with its series of rollers spaced at increasing intervals so that the fruit falls through in progressively increasing sizes



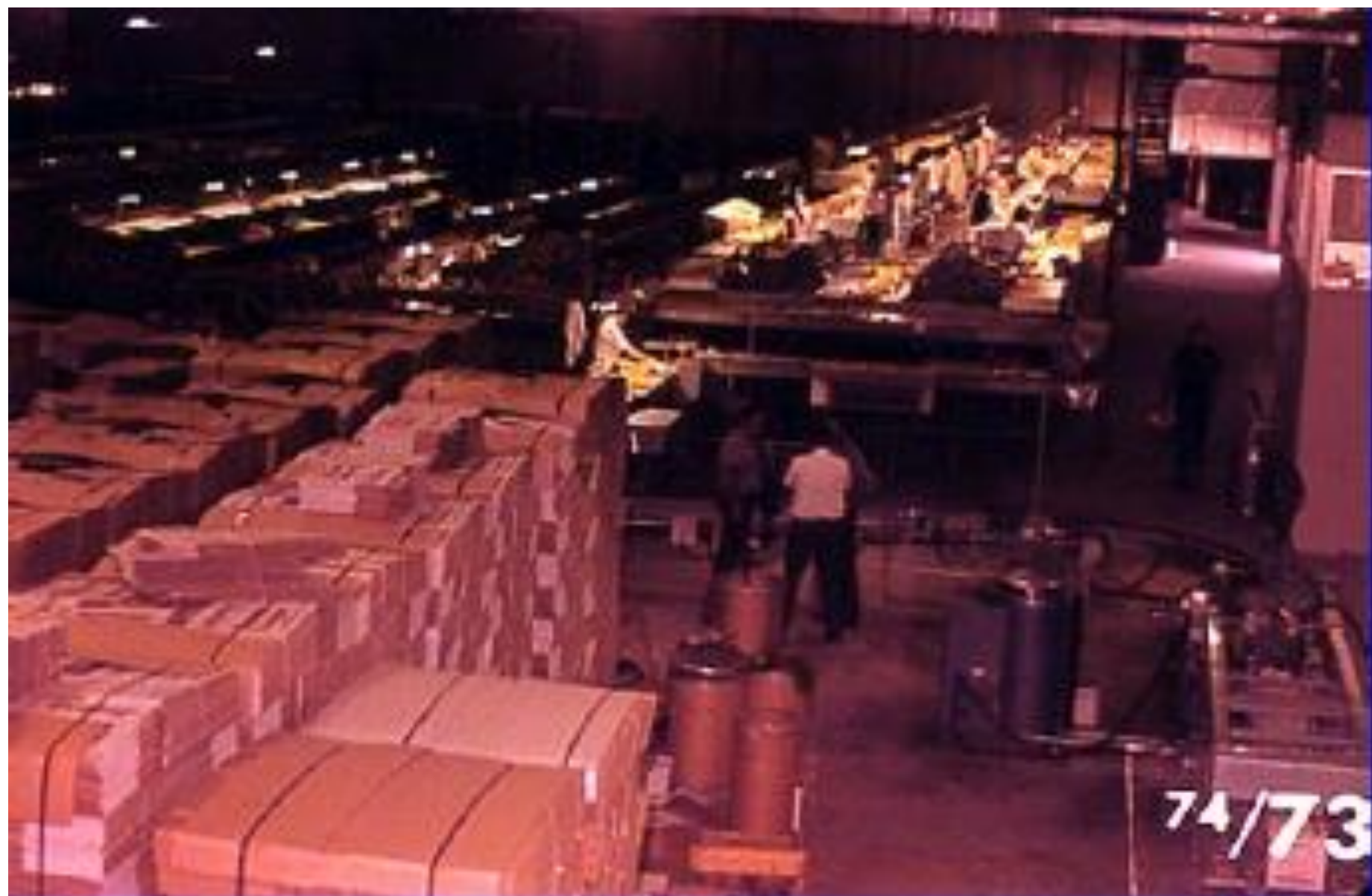
Sorting area where the fruit that does not meet marketable standards is rejected



**All rejected fruit is sent to another plant
for processing into citrus by-products**



Rejected fruit being hauled to another plant where juice, concentrate, pectin, and oil will be manufactured



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Flat cardboard, formed into cartons ready to receive fruit

**Looking down a line of
workers hand packing
fruit in cartons.**

**Pay for this work is on
a per box basis.**



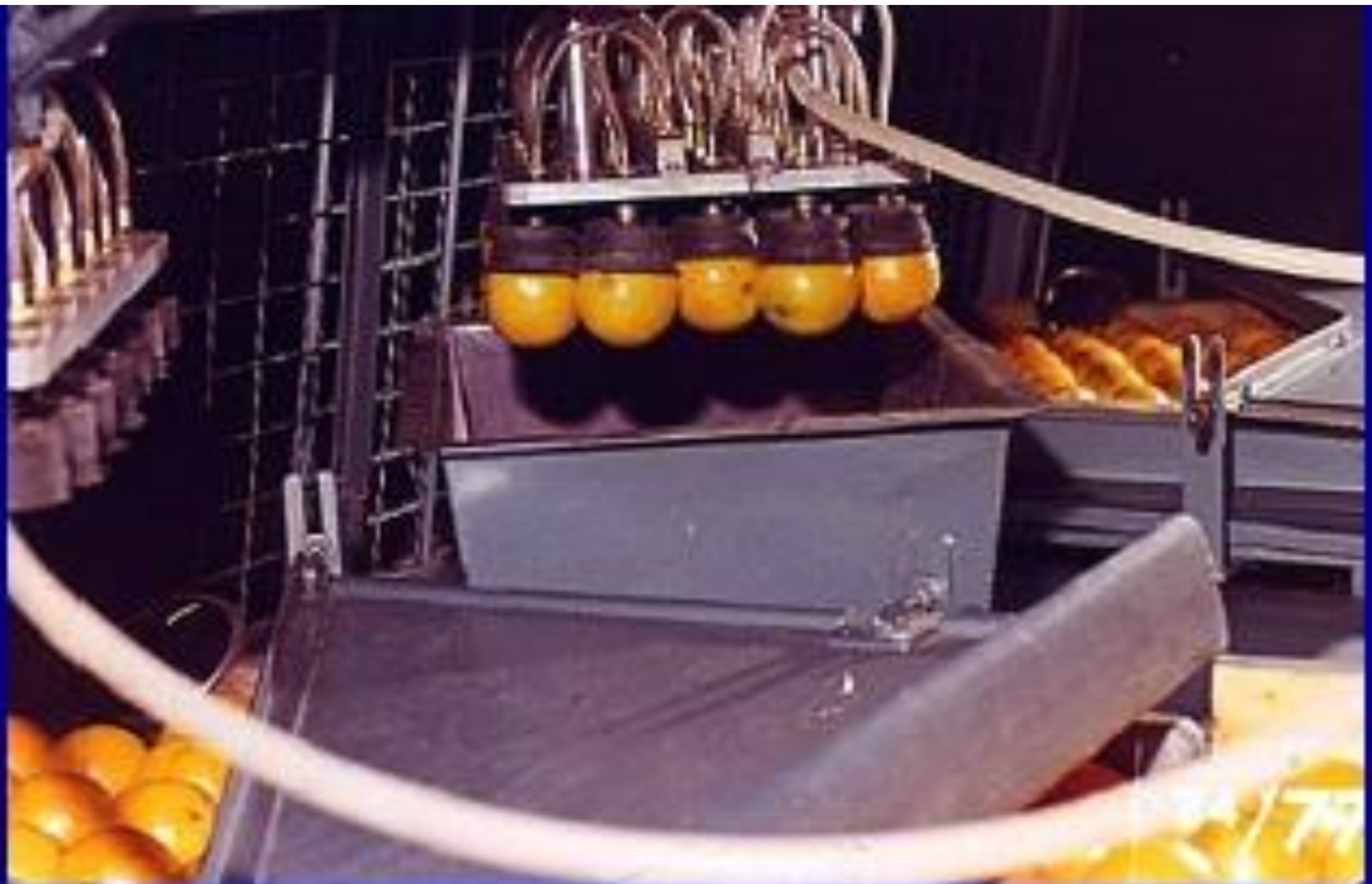
**Looking down on a new
automatic place-pack
Sunkist packing
machine.**

**A series of suction cups
pick up a complete layer
of fruit at one time and
places that layer in a
carton.**

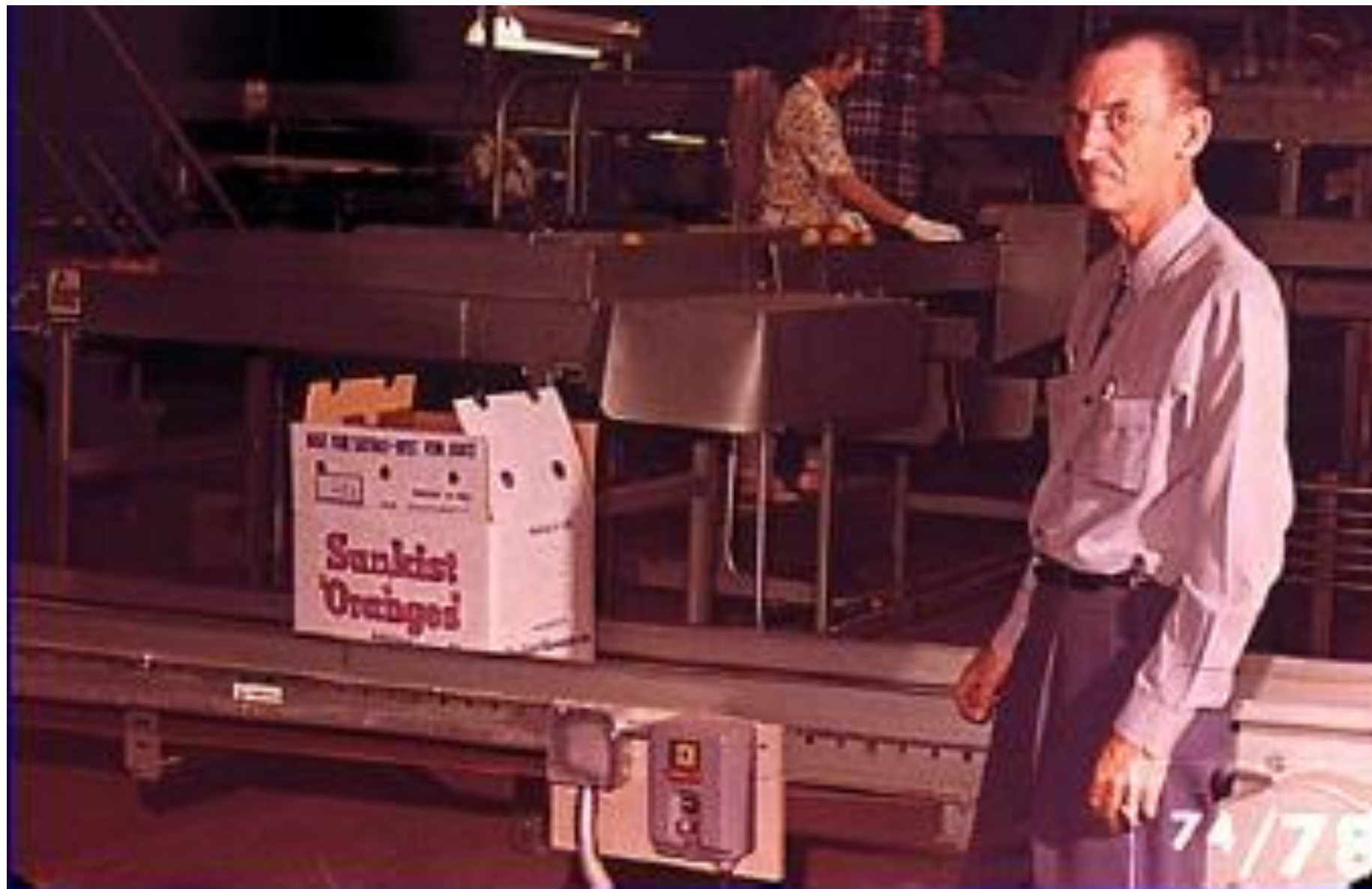




Automatic packing machine showing suction cups on the left just after they have picked up a layer of fruit



Automatic packing machine with the suction cups holding a layer of oranges over the metal collar that holds the carton being packed with fruit



**A packed carton on the conveyer
on its way to be closed and sealed**



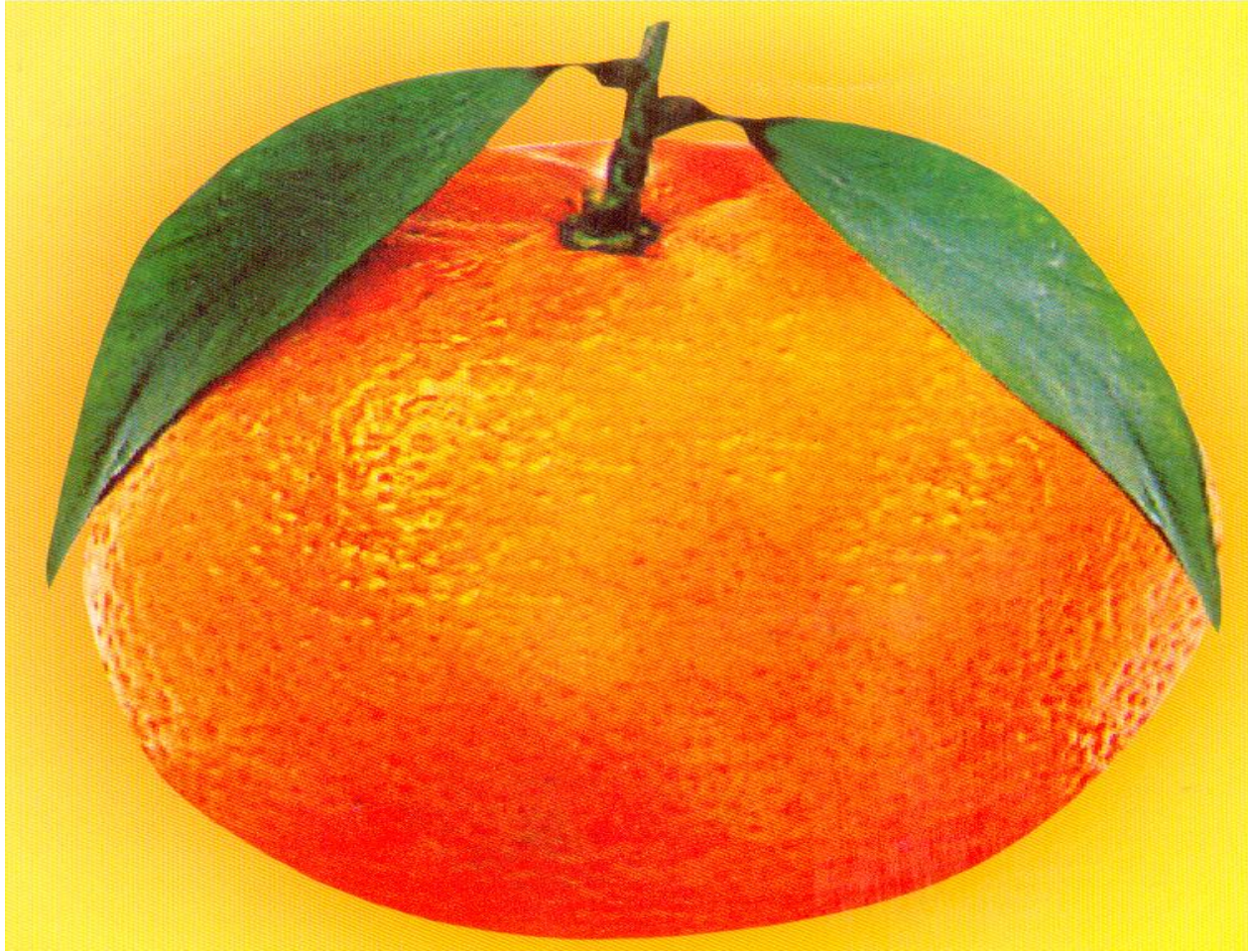
A machine that automatically stacks a predetermined number of cartons of fruit on a pallet



Cartons of oranges being held in a refrigeration room awaiting shipment to eastern markets



Loading the packed fruit into refrigerated railroad cars



THANKS

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