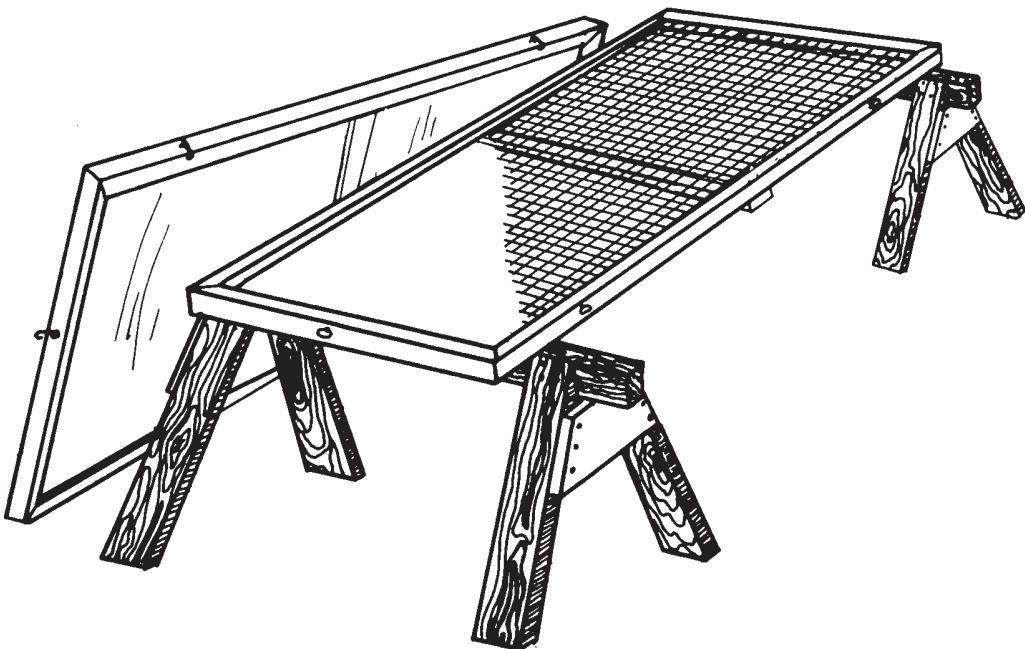
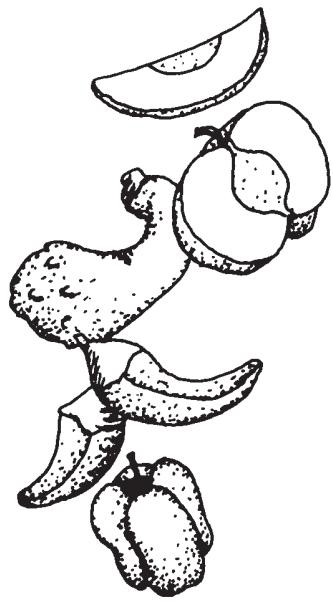
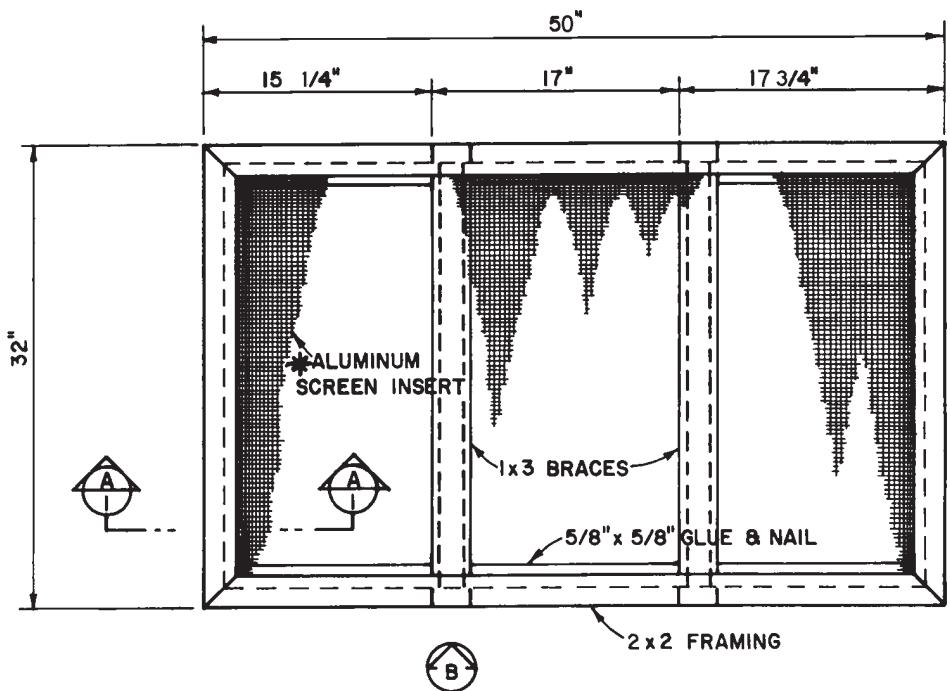
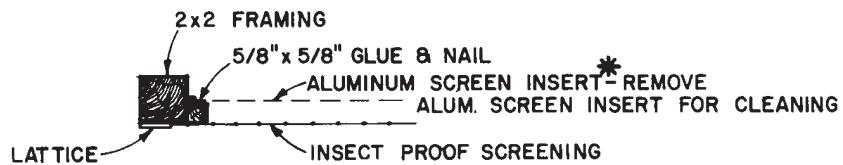


Solar Drier For Fruits And Vegetables

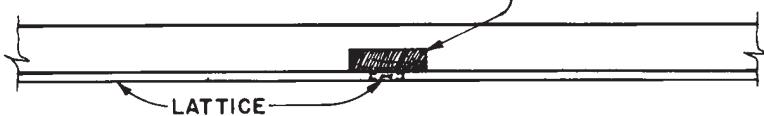




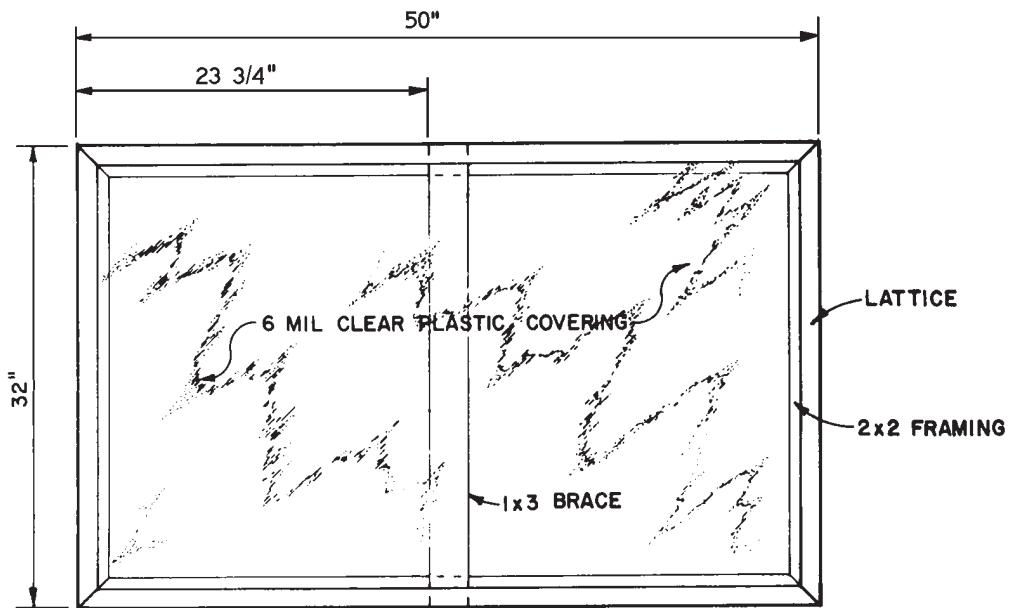
PLAN VIEW-BASE



2x2 FRAMING NOTCHED FOR 1x3 BRACES

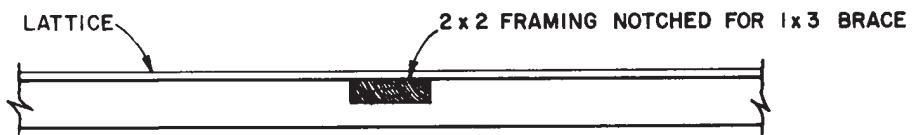


VIEW B

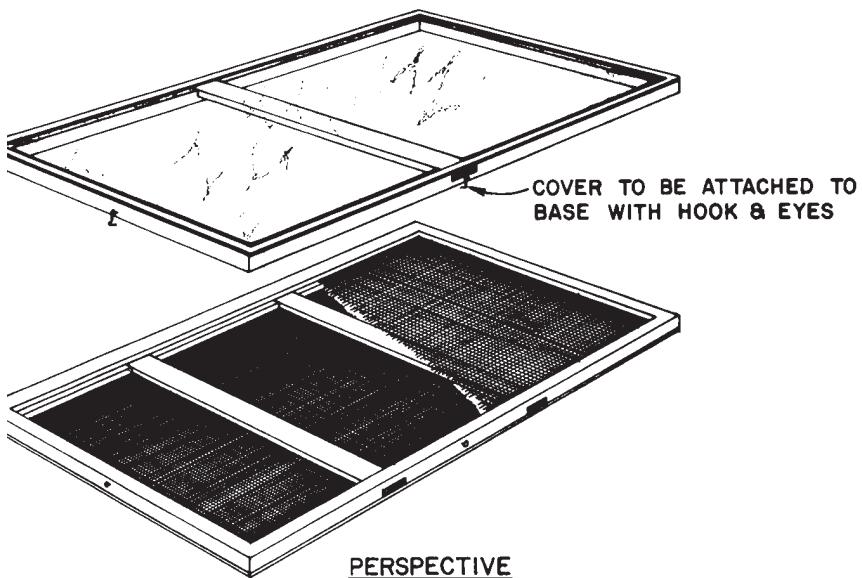


(C)

PLAN VIEW - COVER



VIEW (C)



PERSPECTIVE

PURPOSE AND PRINCIPLES OF DRYING

Bacteria and molds are the two main causes of spoilage in raw foods. You can prevent growth of these by removing most of the water present in raw foods. Drying is an effective way to remove this water, but it must be done correctly. Best results occur when the food is exposed to dry air with a temperature high enough to assure drying at a fairly rapid rate but not so high as to produce "cooking" or "scorching." Detailed instructions on preparing fruits and vegetables for drying are given in HEB 205 "Home Drying of Food," HGIC Leaflet 3080 "Drying Foods," HGIC Leaflet 3084 "Drying Fruits," HGIC Leaflet 3085 "Drying Vegetables," and HGIC Leaflet 3086 "Drying Herbs, Seeds and Nuts."

FACTORS INVOLVED IN DRYING

Two main factors involved in successful drying are:

- Temperature of the air surrounding the product.
- The rate of air movement.

Warm dry air moving over the exposed surfaces of the product to be dried will absorb moisture from it. The higher the temperature of the air the more moisture it will absorb, and the greater the air movement the faster the moisture will be carried away. Air at a temperature of 82 °F will carry over twice as much moisture as 62 °F air, and air at 130 °F has over eight times the moisture-carrying capacity of 62 °F air.

BILL OF MATERIALS

4 pcs. 2" x 2" x 4'-2" - sides of top and bottom
4 pcs. 2" x 2" x 2'-8" - ends of top and bottom
3 pcs. 1" x 3" x 2'-8" - cross braces
2 pcs. *⁵/₈" x ⁵/₈" x 4'-2" - support for window screen
2 pcs. ⁵/₈" x ⁵/₈" x 2'-8" - support for window screen
4 pcs. lattice x 4'-2" - nailing strips for screen wire and clear plastic
6 pcs. lattice x 2'-8" - nailing strips for screen wire and clear plastic
4'-2" x 32" 6-mil clear plastic
28" x 46" aluminum window screen
4'-2" x 2'-8" screen wire - galvanized
tacks, staples and nails
4 screen door hooks and eyes

* dressed lumber size

NOTE: This dryer will hold approximately ³/₄ bushel of fruit.

Prepared by C. V. Privette, Associate Professor, Agricultural Engineering (retired)

The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, sex, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

Issued in Furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of May 8 and June 30, 1914

Public Service Activities