4-22-1943

Co- Operative Extension Work - April 1943

Prairie View State College

COOPERATIVE EXTENSION WORK

IN AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS
AND UNITED STATES DEPARTMENT OF
AGRICULTURE COOPERATING

STATE OF TEXAS

EXTENSION SERVICE
COUNTY AGENT WORK

Prairie View, Texas
April 22, 1943

Bureau of Emtomology and Plant Quarantine
U. S. Department of Agriculture
Washington, D. C.

Dear Sir:

Please send me one (1) set of sheets of insects in color. Thank you kindly.

Yours very truly,

I. W. Rowan

(Mrs.) I. W. Rowan
Supervising Home Demonstration Agent

iwr-h

COOPERATIVE EXTENSION WORK
IN AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF TEXAS

EXTENSION SERVICE
COUNTY AGENT WORK

Prairie View, Texas
April 20, 1943

TO NEGRO COUNTY HOME DEMONSTRATION AGENTS

Dear Agents:

A new D-31 "1943 Home Demonstration Agents' Supply List" is now available and a copy is enclosed.

May I ask you again to keep this List on your desk and won't you refer to it each time you make an order? This will certainly make our work easier and will insure your getting the material requested as soon as possible.

We do wish we could supply all MS's you request but they are limited and we shall greatly appreciate your ordering the number for your county as indicated on your List.

Send two (2) copies of Form D-23 to this office and keep a file copy, when requests for bulletins etc. are made.

Yours very truly,

I. W. Rowan

(Mrs.) I. W. Rowan
Supervising Home Demonstration Agent

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encls.

COOPERATIVE EXTENSION WORK
IN AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS
AND UNITED STATES DEPARTMENT OF
AGRICULTURE COOPERATING

STATE OF TEXAS

EXTENSION SERVICE
COUNTY AGENT WORK

C
O
P
Y

Prairie View, Texas
April 22, 1943

Mrs. Pazetta Taylor, President
Texas Home Demonstration Council
Route 3 Box 322
Longview, Texas

Dear Mrs. Taylor:

Please find enclosed letters prepared for your signature which I hope are in keeping with the idea advanced in your letter of April 8th.

As soon as I have an opportunity to talk with Mrs. Conner and Mrs. Brown, I will prepare the letters for you to the members of the Executive Committee. I am hoping that the Executive Committee can meet on May 8th or 29th, since these two dates will not conflict with a regular county home demonstration council meeting in a county where we have members of the committee living.

In the event that May 8th is the better date, please permit me to sign the letters and mail them from here thereby saving a few days in having them reach the members.

Yours Very truly,

(Mrs.) I. W. Rowan
Supervising Home Demonstration Agent

iwr-h
enclosures

COOPERATIVE EXTENSION WORK

IN AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF TEXAS

EXTENSION SERVICE
COUNTY AGENT WORK

Prairie View, Texas
April 29, 1943

TO ALL NEGRO COUNTY HOME DEMONSTRATION AGENTS
And AGRICULTURAL AGENTS IN COUNTIES WITHOUT
HOME DEMONSTRATION AGENTS

We know you are doing a good job in helping rural, town, and city families grow their food and some to spare. You have helped many town and city people plant their first garden, but we hope - not their last.

One good job calls for another and the next big one facing all of us is -- conserving all surplus food.

The home demonstration staff wants to help you -- help home demonstration agents complete plans for a county-wide food preservation program -- help you organize yourself and work so you can help town people. We want to help agricultural agents where there are no home demonstration agents to train some leaders in food preservation. Please write, before May 10th, giving detailed information regarding your plans, accomplishments, and desires for help.

With regard to your Extension Service News Release (the yellow sheets) of April 29th, title Pressure Cooker Rationing, I wish to urge you to keep advised on the situation in your county.

Talk with the white home demonstration agent and be sure that she knows the needs of Negro people for canning equipment.

Be sure to see that the canning equipment owned by, in the possession of, or to be used by Negroes is in usable condition immediately.

Equipment for drying should be ready NOW. I hope <u>you</u> have done some of this work since our meetings this month.

Let us save food and share information, courage and belief in each other.

Yours very truly,

I W Rowan

(Mrs.) I. W. Rowan
Supervising Home Demonstration Agent

iwr-sh

M. David

COOPERATIVE EXTENSION WORK

IN AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF TEXAS

EXTENSION SERVICE
COUNTY AGENT WORK

Prairie View, Texas
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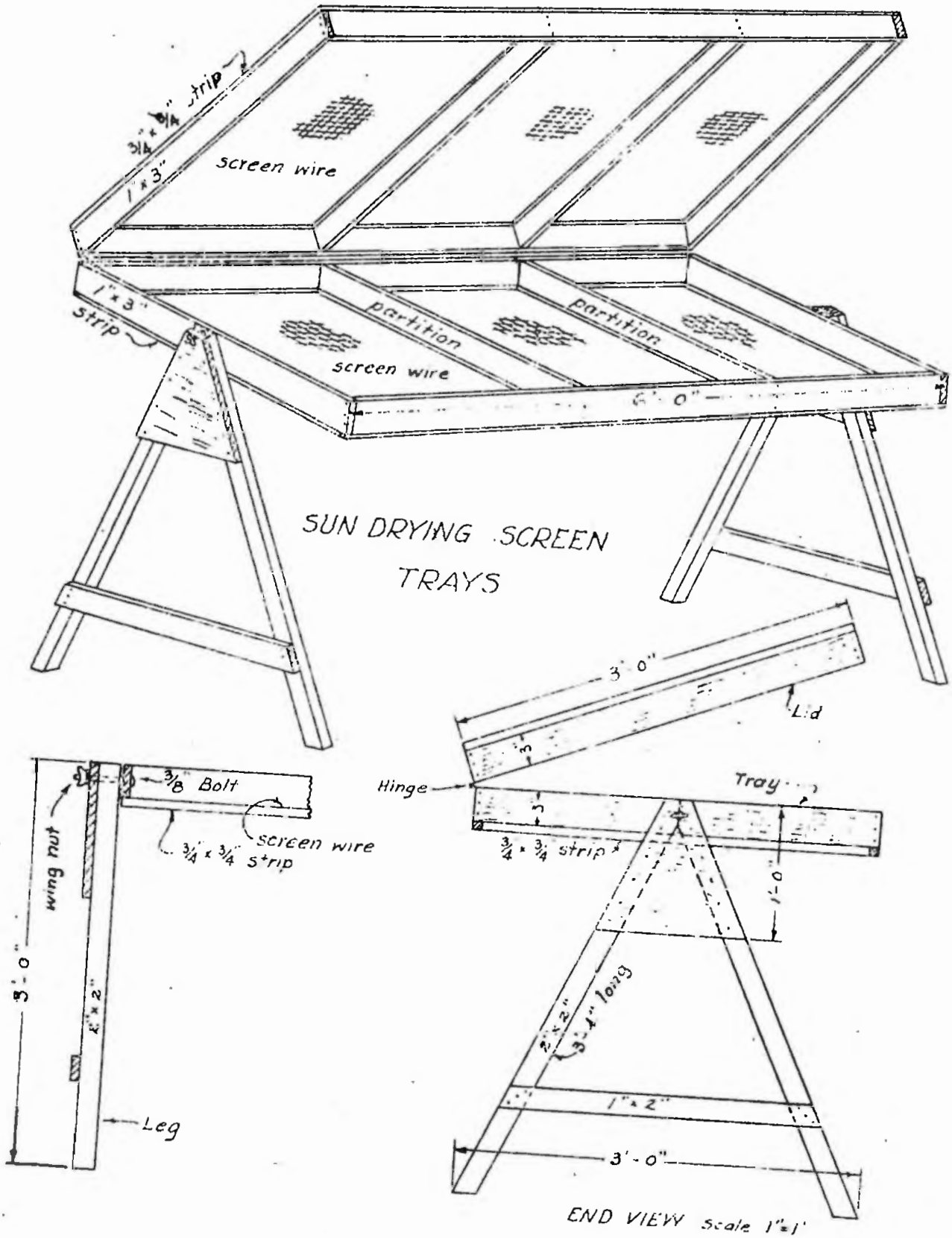
Yours very truly,

I W Rowan

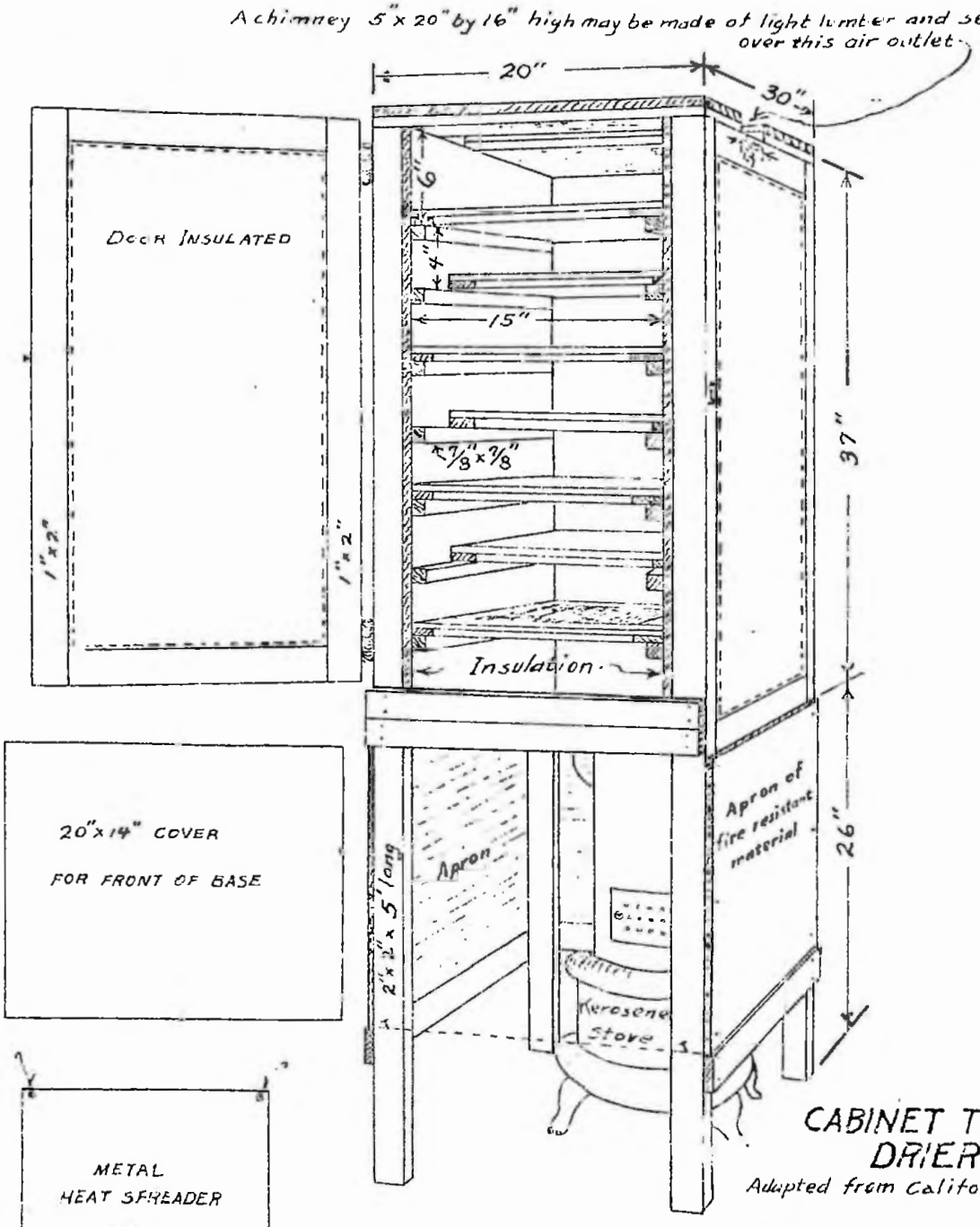
(Mrs.) I. W. Rowan
Supervising Home Demonstration Agent

iwr-sh



DRIER WITH SCREEN COVER
FOR DRYING IN THE SUN

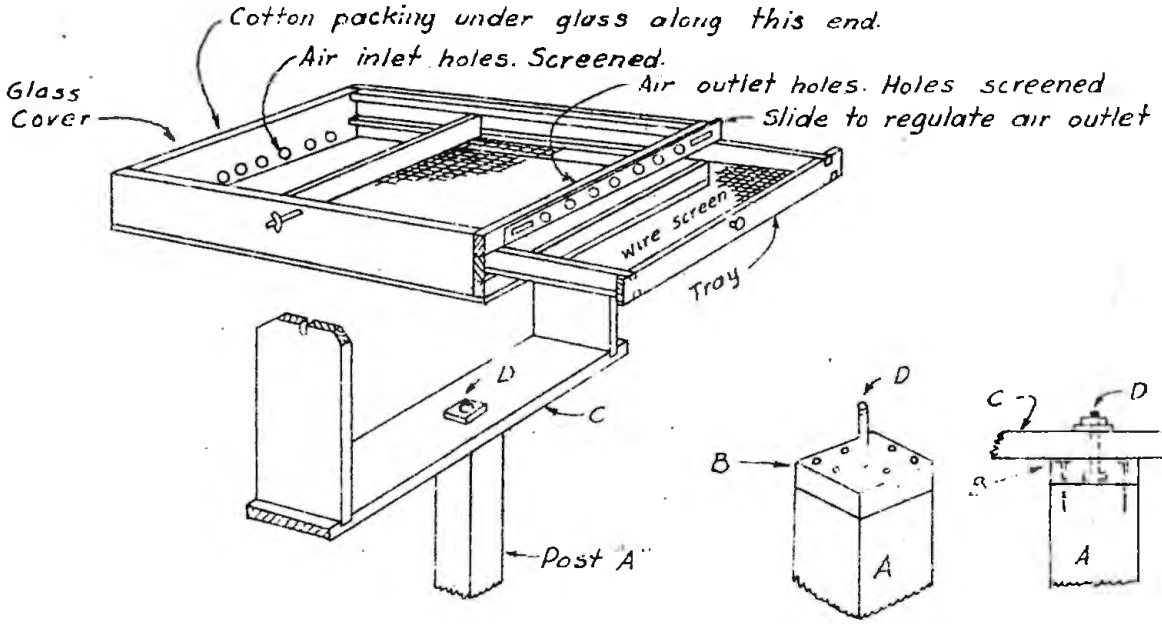
Sheet 1 of 2 sheets
SERIAL NO. 256



CABINET TYPE DRIER

Adapted from California

SERIAL No. 255



POST CONNECTION
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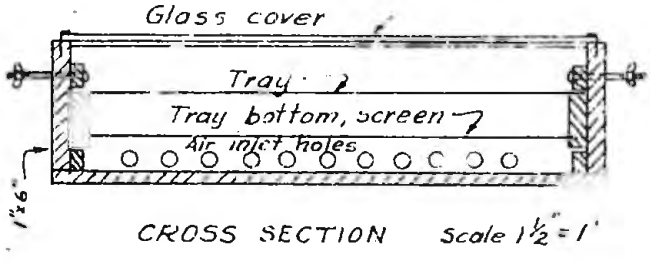
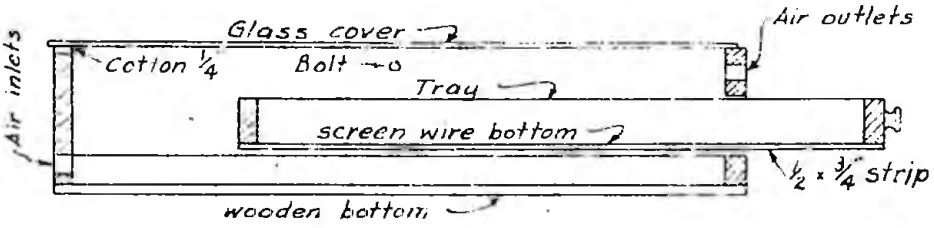
Post "A" is set in ground.



CROSS SECTION Scale 1½" = 1'



SECTION LENGTHWAYS Scale 1½" = 1'

DRIER WITH GLASS COVER

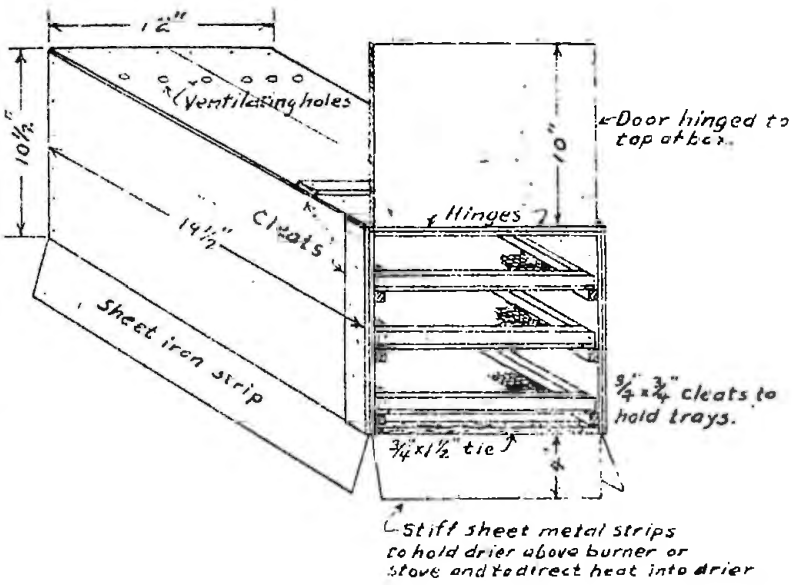
FOR DRYING IN THE SUN

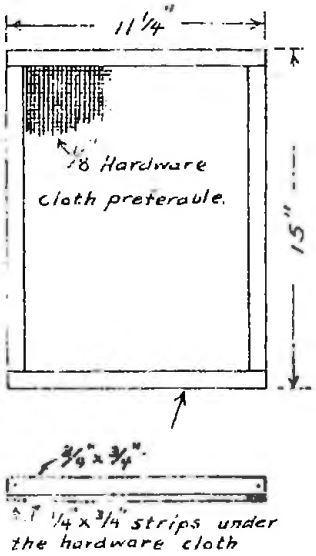
Size of case shown above is 24" x 30" x 6" deep.
The glass cover may consist of a window sash with several panes with the size of the case adapted to fit sash.

Cooperative Extension Work in Agriculture and Home Economics
A&M. College of Texas and U.S. Department of Agriculture cooperating
H.H. Williamson, Director, College Station, Tex.

FRUIT or VEGETABLE DRIERS
TO USE IN SUN

Ecorse Sale & Wash.	Scale as shown
Traced by Vavra	Sheet 2 of 2 sheets
S 1941	Serial No. 256





TRAY

Note: The bottom and end of the box are first removed before constructing the drier. The end is used for the door

APPLE BOX DRIER
FOR USE OVER A STOVE

Cooperative Extension Work in Agriculture and Home Economics A.&M. College of Texas & U.S. Department of Agriculture cooperating H.H. Williamson, Director College Station, Tex.	
FRUIT OR VEGETABLE DRIERS TO USE OVER A STOVE	
Adapted	Scale as shown
Traced by M.A.B.	Sheet 2 of 2 Sheets
5-1941	Serial No. 255

M. Estelle

COOPERATIVE EXTENSION WORK
IN AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF TEXAS

EXTENSION SERVICE
COUNTY AGENT WORK

Prairie View, Texas
April 29, 1943

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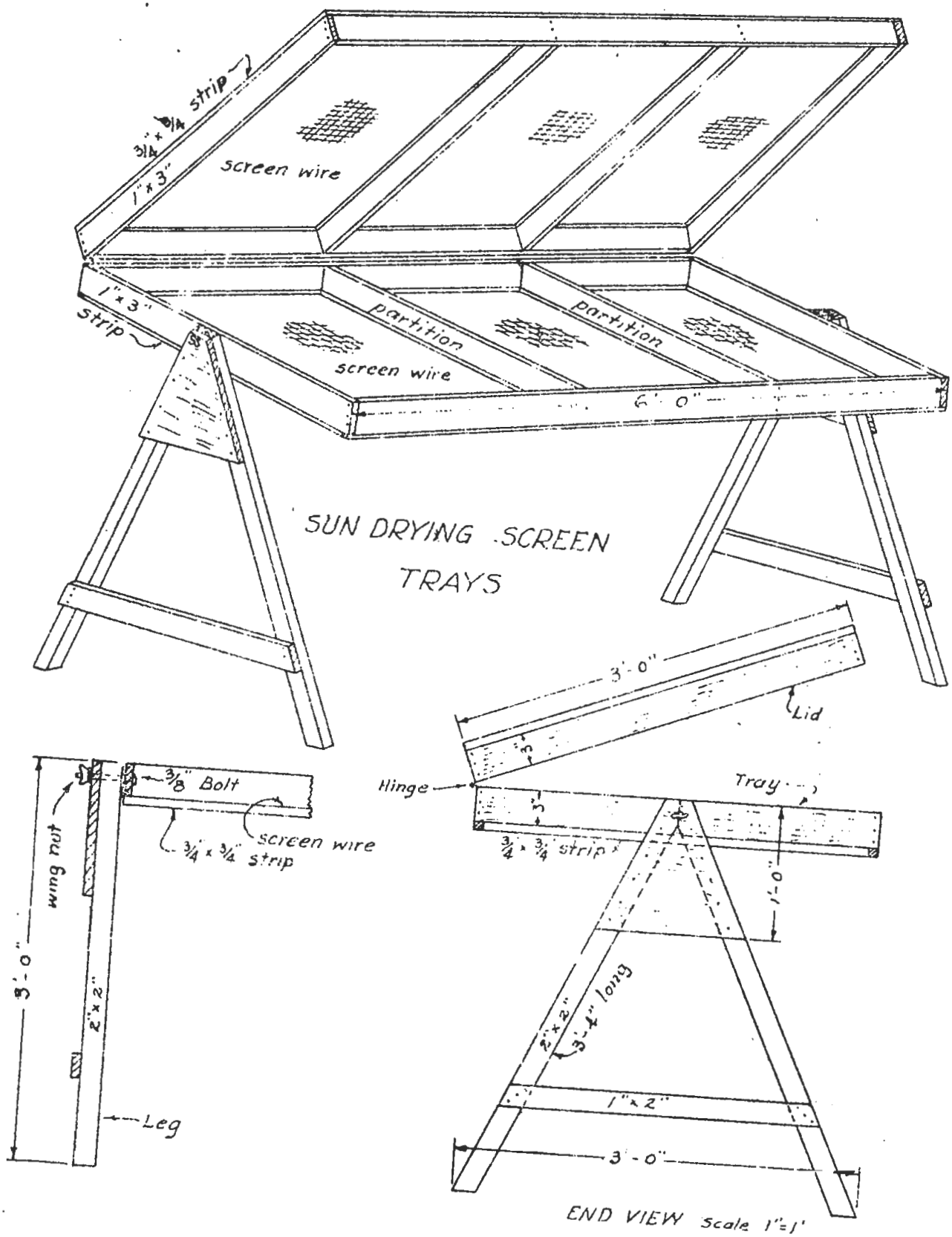
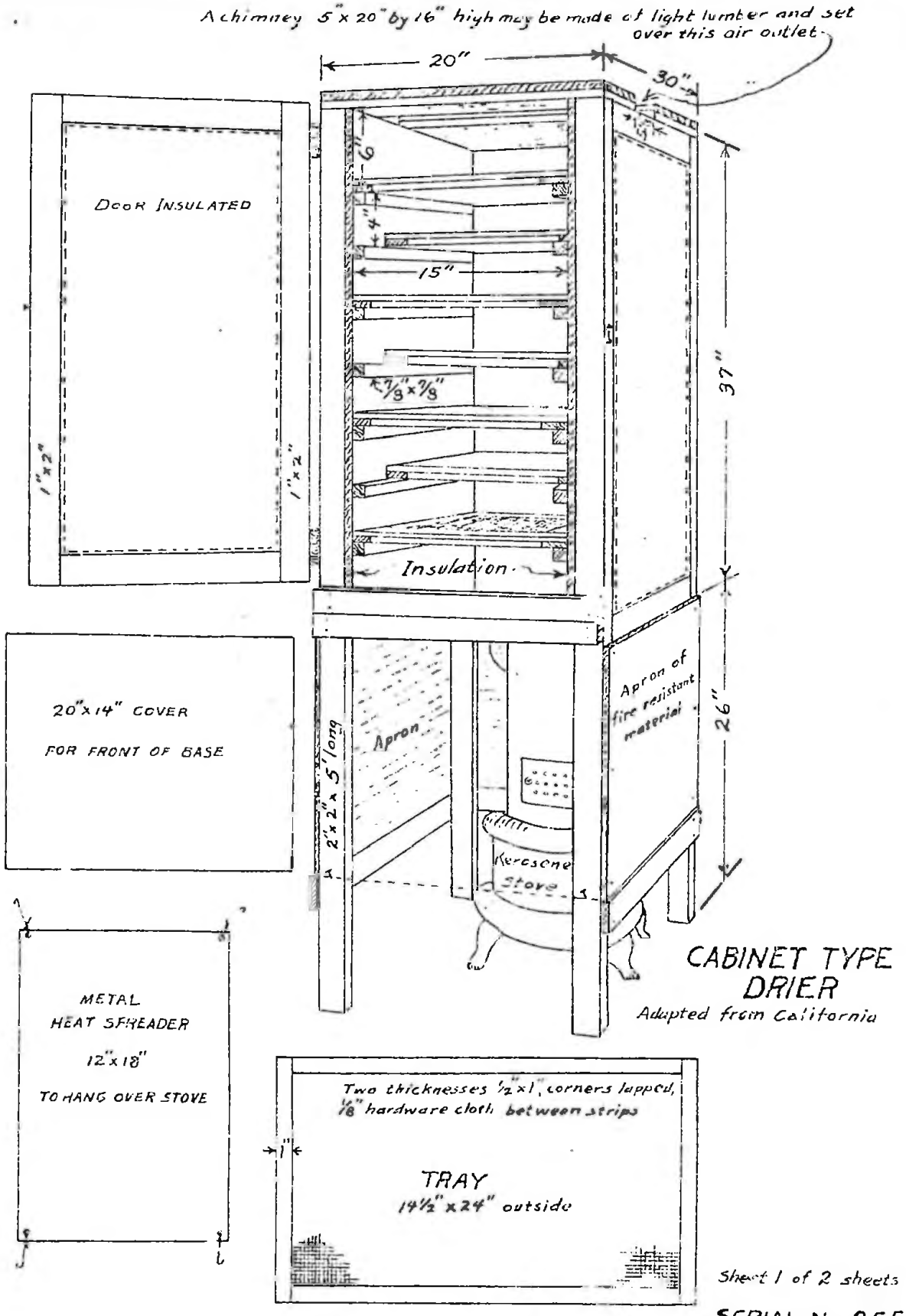
Supervising Home Demonstration Agent

iwr-sh



DRIER WITH SCREEN COVER
FOR DRYING IN THE SUN

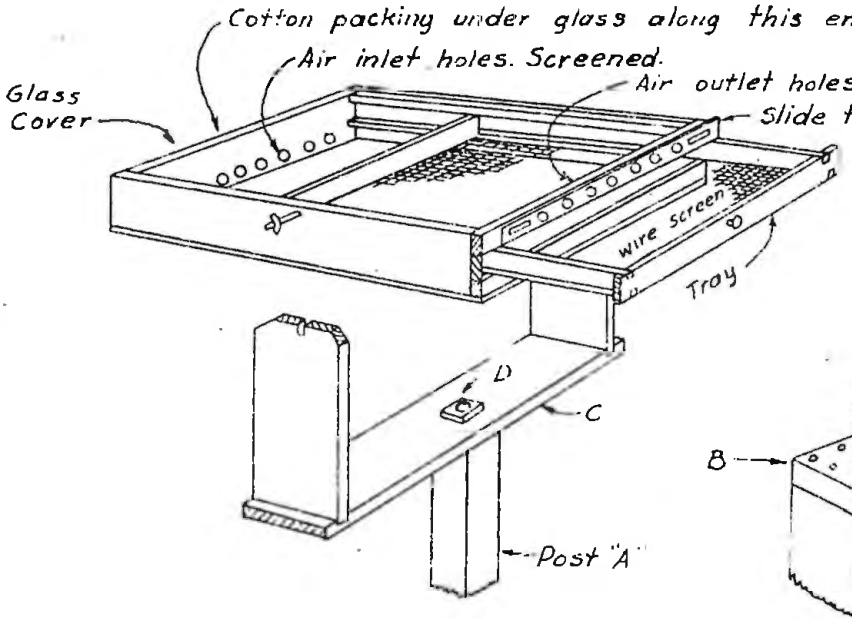
Sheet 1 of 2 sheets
SERIAL NO. 256

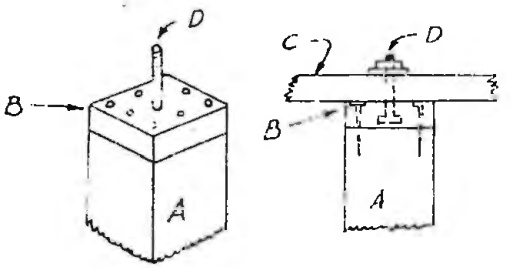


CABINET TYPE DRIER

Adapted from California

SERIAL No. 255





POST CONNECTION
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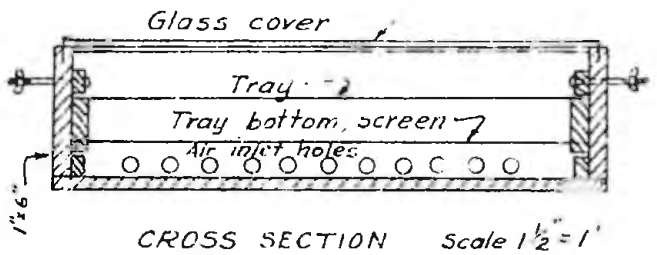
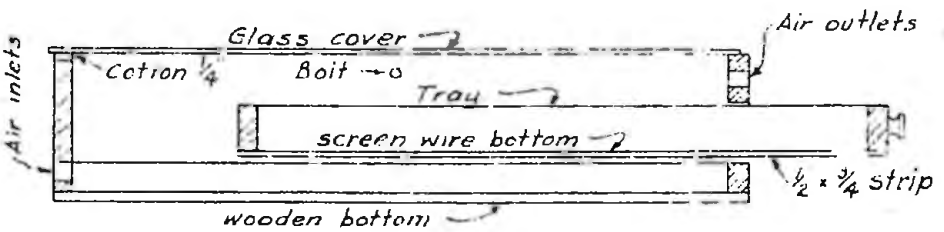


CROSS SECTION Scale 1½" = 1'



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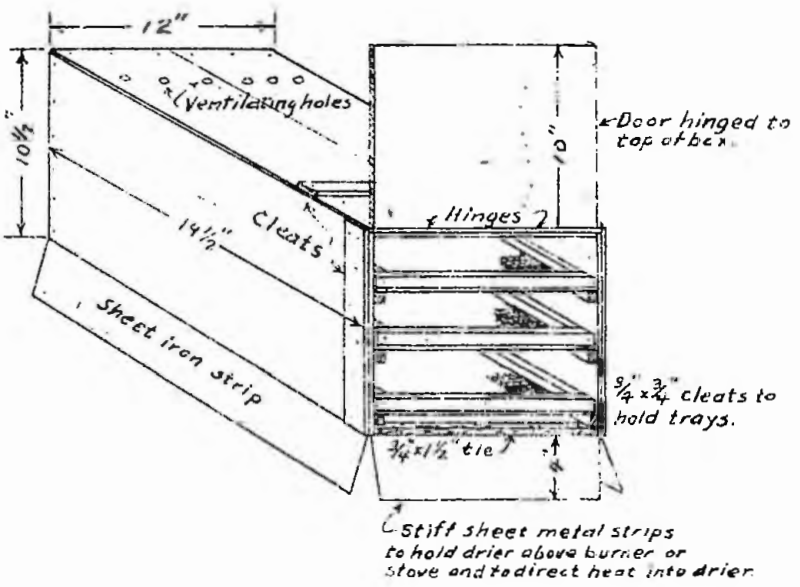
Cooperative Extension Work in Agriculture and Home Economics. A&M College of Texas and U.S. Department of Agriculture cooperating. H.H. Williamson, director, College Station, Tex.	
FRUIT or VEGETABLE DRIERS TO USE IN SUN	
Eleanor A. Wash.	Scale as shown
Traced by Mecca	Sheet 2 of 2 sheets
S 1941	Serial No. 256



TRAY

Note: The bottom and end of the box are first removed before constructing the drier. The end is used for the door.

APPLE BOX DRIER
FOR USE OVER A STOVE

Cooperative Extension Work in Agriculture and Home Economics A.&M. College of Texas & U.S. Department of Agriculture cooperating. H.H. Williamson, Director College Station, Tex.
FRUIT OR VEGETABLE DRIERS TO USE OVER A STOVE
Adapted / Scale as shown
Issued by M.A.B. / Sheet 2 of 2 Sheets
5-1941 / Serial No. 255

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS AND UNITED
STATES DEPARTMENT OF AGRICULTURE COOPERATING

MS 556 Extension Service
1943 County Agent Work

ELECTRIC FRUIT AND VEGETABLE DEHYDRATORS FOR THE HOME

P. T. Montfort, Research Associate, Agricultural Engineering Department
M. R. Bentley, Extension Agricultural Engineer
Winifred Jones, Specialist in Food Preservation, Extension Service

Dehydrating is an old and economical method of preserving certain fruits and vegetables. Dehydration in the home is especially important now, while the production and preservation of fruits and vegetables are so necessary, since it reduces the volume of the product to be stored, thus effecting a marked saving in the metals, rubber and other materials used in the more common methods of food preservation.

The process of dehydration is fundamentally that of removing water from the product by evaporation, with heat, which may be derived from the sun or from some fuel such as oil, gas, or electricity.

Advantage of Electricity

Electricity offers certain definite advantages as a source of heat for the home drying of fruits and vegetables. The more important of these are:

1. It is clean - it does not give off objectionable fumes; the products are inside the cabinet where they are protected from dust, flies, and other contamination.
2. Convenience – it requires a minimum of labor and attention.
3. It does not heat up the room.
4. The use of the electric drier leaves the kitchen stove free for the normal preparation of food.
5. Equipment is easily portable – can be used at any convenient location.
6. It can be used at any time, regardless of weather.

Types of Equipment

There are two general types of small electric dehydrators in use today, – the "forced air" and the "gravity" or "natural" air circulation. The

"forced air" type incorporates a fan which speeds up the circulation of the air. The "gravity", or "natural" air circulation type, depends upon the rise of the heated air through the drier for air circulation.

The chief advantages of the "forced air" type are: (1) a faster rate of drying (2) a uniform temperature throughout the drying compartment which makes it unnecessary to shift the trays during the drying period. The principle advantages of the non-fan types are: (1) the simplicity of construction (2) lower first cost.

There are a number of satisfactory plans available for the home construction of small electric dehydrators. The three described in this publication have been built and tested in the laboratories at A & M College, and have been used successfully by home operators. These plans include a fan-type and a non-fan or "gravity" type drier, in sizes suitable for the average farm. The third unit is a small drier of the "gravity" type designed primarily for use by the urban or sub-urban "Victory" gardener or on the farm where only small quantities of fruits and vegetables are to be dried.

Materials

The framing for the two farm-size dehydrators should be at least 1" x 2" material. The sides, top, and bottom may be of ordinary 1" lumber, plywood, fiber board, or any other common building boards. The plywood, or building boards, are light in weight and easily fabricated. The small or "apple box" dehydrator shown in the illustration, was constructed from apple crates; hence, its name. Other wooden boxes, plywood, building board, or ordinary lumber, may be used for it.

The trays consist of a light weight frame to which is attached a one-eighth to one-quarter inch hardware cloth bottom. Copper or galvanized window screen wire may be used; however, it does not permit as good air circulation. If hardware cloth or screen wire is not available, the bottoms of the trays may be made with light slats spaced approximately one-half inch apart. Cheese cloth, or other open mesh thin cloth, should be placed over the slats. Cheese cloth used in the trays with hardware cloth bottoms tends to keep the trays clean and to prevent any discoloration of the food. The galvanized wire may cause a slight discoloration of certain fruits or vegetables which come in contact with it. This discoloration is not harmful, but detracts from the appearance of the product. It can be avoided by washing the trays in a weak solution (1 tablespoon to 1 quart) of vinegar in water, before the drying operation.

Insulation

Insulation in the electric dehydrator is important in maintaining correct temperatures, conserving heat, and lowering the cost of operation. Some insulating boards, as shown in the plans for the two farm-size dehydrators, possess sufficient structural strength to be used in these small units without supporting walls. If the walls are built of plywood,

Masonite, or lumber, there should be a lining of 5/8" Celotex, or equivalent, insulating material. Two to three thickensses of ordinary corrugated cardboard may be used in place of the commercial material. The "apple box" dehydrator is insulated with one thickness of corrugated cardboard.

Ventilation

Moisture removed from the drying food is taken up by the heated air. However, in order to conserve heat, it is desirable that the air be as nearly saturated as possible before it is exhausted from the cabinet. The number and size of inlet and outlet holes shown on the drawings of the different driers are designed to provide the most efficient operation under average conditions.

Heat Source

Ordinary Mazda lamps are recommended as a source of heat in these small home dehydrators. They are readily available in a wide range of sizes. The size and number of the lamps can be varied to provide the correct temperature. Five 150-watt lamps should be used at the beginning of the drying period in the large non-fan dehydrator. Six 150-watt lamps should be used in the fan-type unit. A 200 to 300-watt lamp will supply sufficient heat for the "apple box" drier. As the drying progresses, less heat is required. The size, or number, of lamps can be varied to control the temperature within the desired limits.

Operating Temperatures

Drying temperatures will vary between 125° F and 165° F, depending upon the kind of vegetable or fruit. The tables on pages 6 and 7 of Extension Circular C-170, "Drying Foods at Home," gives the recommended temperatures for the various vegetables and fruits. Where a range of temperatures is shown, the electric dehydrators should be started at the highest temperature. The heat should be so regulated that this temperature is not exceeded more than ten degrees throughout the drying period.

Capacity

The amount of fruit which can be dehydrated at one time in the home unit will vary depending upon the kind of fruit or vegetable. The fan type drier will hold approximately 19 pounds of green product at one time. The large non-fan dehydrator will hold 13 pounds, and the "apple box" drier will hold approximately 4 pounds. Dehydrated vegetables will weigh approximately one-tenth as much as the fresh product, and fruits approximately one-eight of the original weight.

The Operating Costs

The operating cost per pound of dried product will vary widely, depending upon the type of product to be dried, whether or not the dehydrator is operated at full capacity, and upon outside weather conditions. As-

suming the cost of electricity at 3¢ per kilowatt hour, the hourly cost of the three types of driers will be as follows:

Fan-type drier with 900 watt lamps and 50 watt fan-2.85 cents per hour.

Non-fan drier with 750 watt lamps--2.25 cents per hour.

"Apple box" drier with 300 watt lamp-- .9 cents per hour.

Preparing, Processing, and Storing the Product

Extension Service Circular C-170, "Drying Foods at Home," gives detailed information on the correct methods of preparing, blanching, sulfuring, drying, and storing the various fruits and vegetables.

Operating Hints

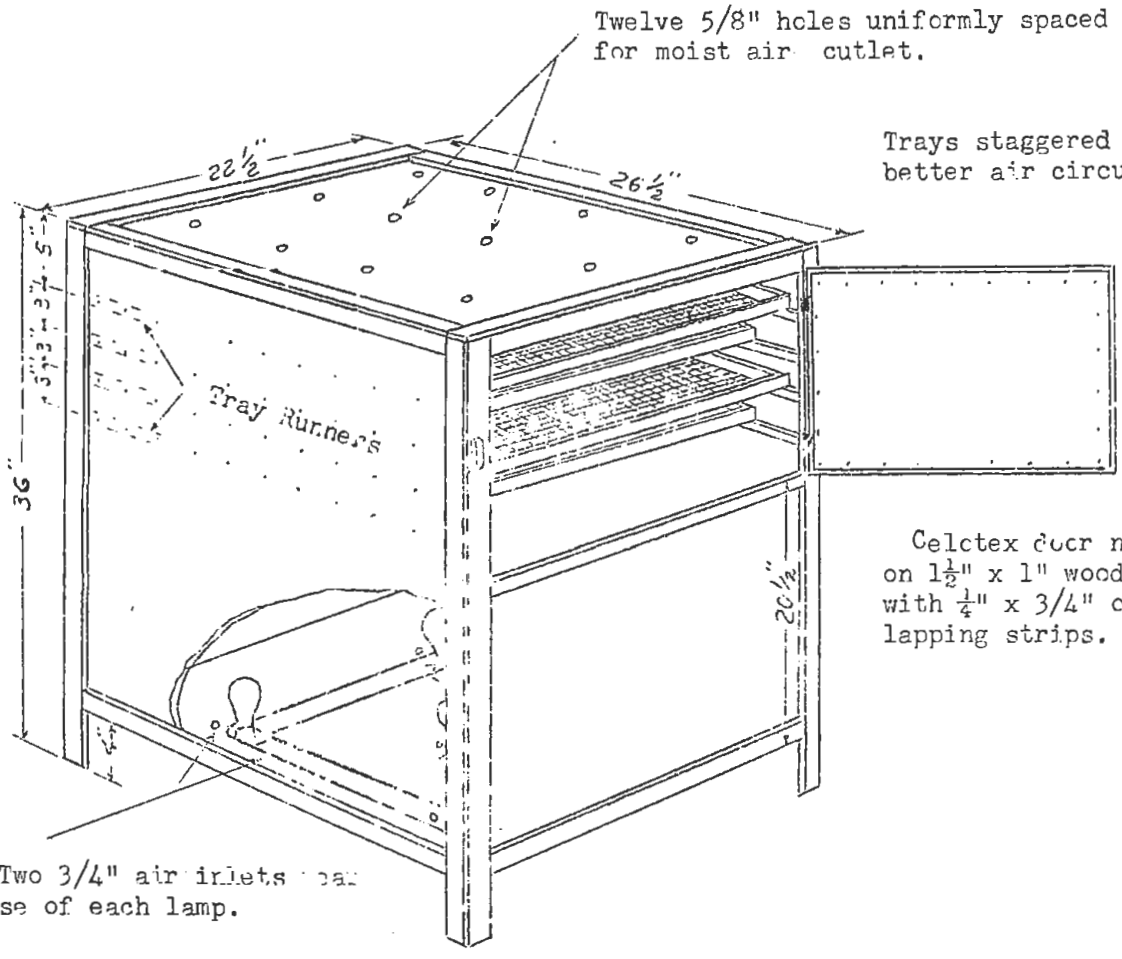
The heat should be turned on for about an hour before drying begins. This dries out any moisture which may have accumulated in the cabinet and brings the temperature up to that desired for starting the operation.

A thermometer is desirable to aid in maintaining correct temperatures. It should have a scale reading to at least 200° F. A candy thermometer, dairy thermometer, and some brooder thermometers are satisfactory. If the thermometer is long enough to insert through the side of the box, it will prevent having to open the door for readings; otherwise, the thermometer may be placed on a tray. In either case, the thermometer should be so located as to show the temperature on or near the bottom tray.

If a thermometer is not available, whether or not the temperature is too hot may be judged by feeling of the food. If the food is not cooler than the surrounding air and does not feel moist, the temperature is too high. A temperature that is a little too high may not injure the food until it gets nearly dry, when it may scorch it.

The trays in the non-fan driers must be rotated at intervals of one to one and one-half hours during the drying period. This is necessary because the material on the bottom try, which is nearest the heat source, dries more rapidly. It will not be necessary to shift the trays in the fan-type unit, because the air temperature is uniform throughout the drying compartment.

The material to be dried should be spread on trays in a uniform thin layer at a rate of one to one and one-half pounds of product per square foot of tray.



NOTE:

Top, sides, ends, bottom and door are all cut from ½" Celotex.

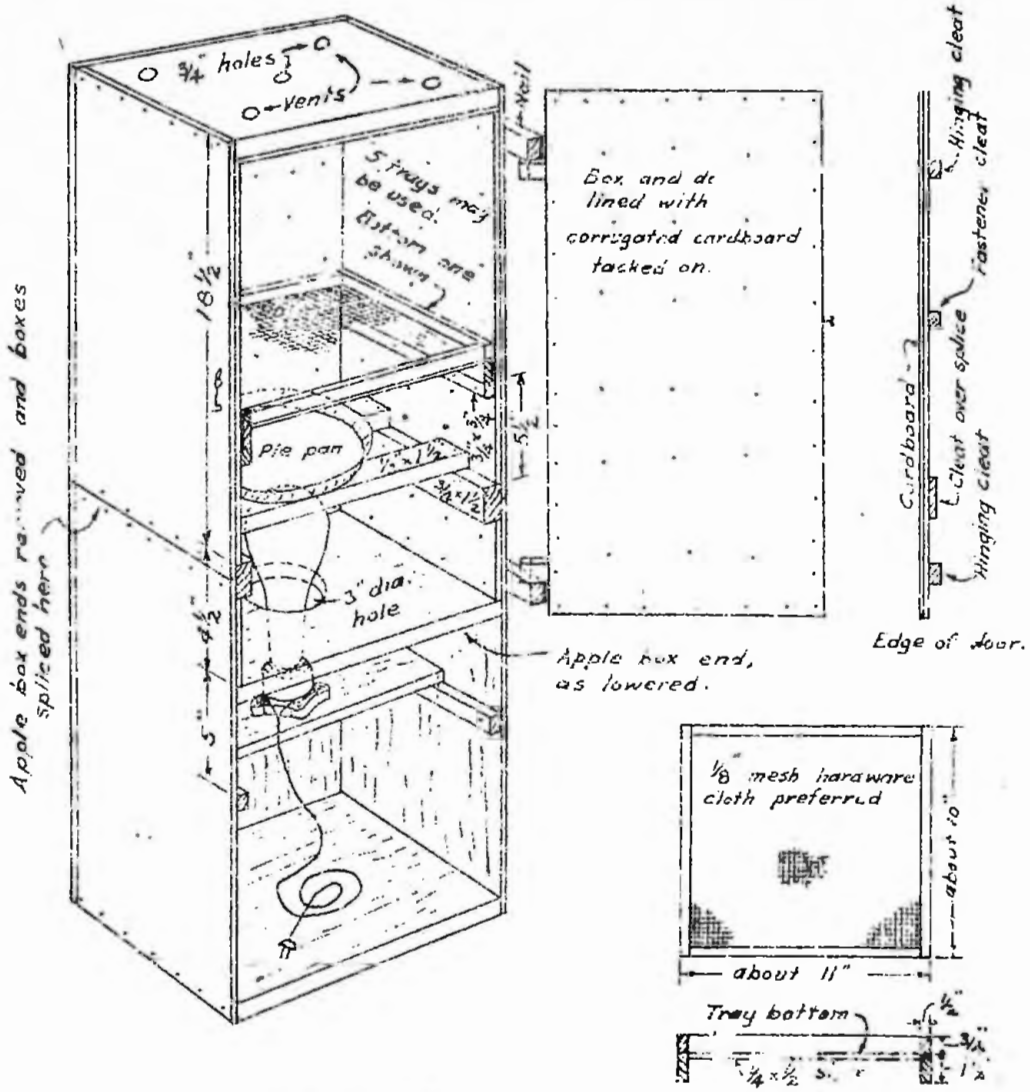
Corners and cross support members are 1½" x 1" wood strips.

Tray supports are 3/4" x 3/4" wood strips.

Trays are 5/8" x 3/4" wood strips with 1/8" mesh hardware cloth for bottoms. Hardware cloth is held in place with 3/4" x 1/4" wood strips. Tray dimension are 19 3/4" x 21½".

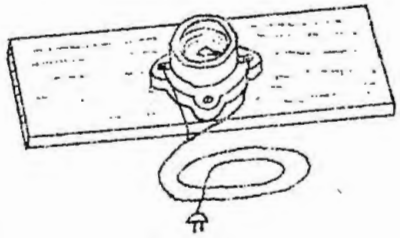
H O M E B U I L T N A T U R A L D R A F T

F R U I T A N D V E G E T A B L E D R I E R



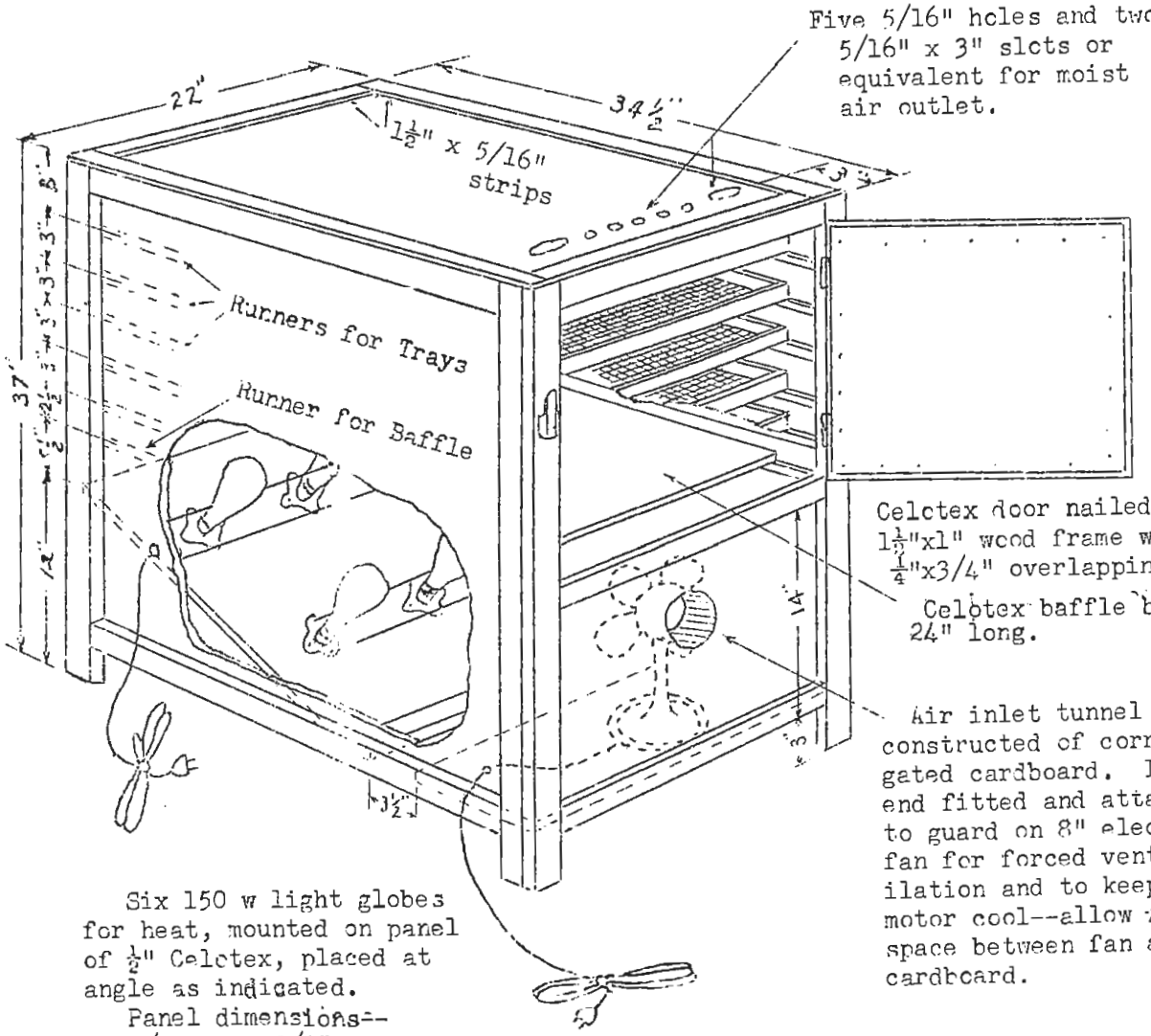
TRAY

Only one pair of tray supporting cleats is used. These are under the bottom tray. Trays are stacked on each other. Lumber from a third apple box used in making the trays.



Lamp receptacle fastened to a piece of board 4" to 6" wide. 300 or 200 watt lamp

"APPLE BOX" TYPE DEHYDRATOR



NOTE:

Top, sides, bottom, door, heat baffle board and light mounting board are all cut from ½" Celotex.

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Trays are 5/8" x 3/4" wood strips with 1/8" mesh hardware cloth for bottoms. Hardware cloth is held in place with 3/4" x 1/4" wood strips. Tray dimensions--19 3/4" x 26".

Fan support, 1" x 8" wood.

H O M E B U I L T F O R C E D D R A F T

F R U I T A N D V E G E T A B L E D R I E R

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS AND UNITED
STATES DEPARTMENT OF AGRICULTURE COOPERATING
Extension Service
MS-520 County Agent Work

TRAYS FOR DRYING FRUIT OR VEGETABLES OVER A STOVE

Winifred Jones, Specialist in Food Preservation

In making a vegetable and fruit drier to use above the kitchen stove, the width and length should be determined by the size of the stove. It is suggested that the drier be made with three separate trays because they are easier to handle. Then too if there is a small amount to be dried only one tray could be used.

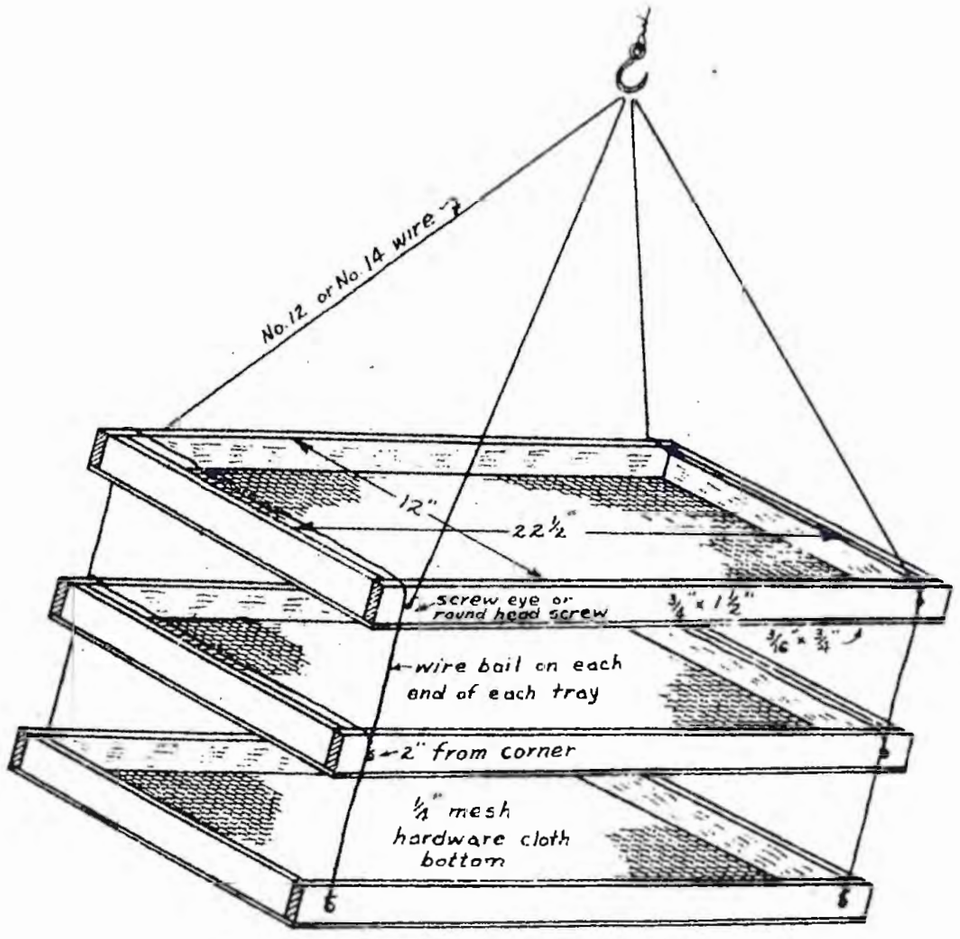
To make the tray use 1½" x 3/4" lumber - 2 pieces may be 24 inches long if this length is suitable, and 2 pieces may be 14 inches long for the width. For the bottom use 1/4" or 3/8" hardware cloth, but window screen might be used. Hardware cloth is better because it does not rust as easily as window screen. The tray made with this size hardware cloth may be used for purposes other than drying, such as: grading English peas, screening peanuts, or cleaning dried peas and beans.

The first tray is to be hung by two wires about no. 12 or 14 size. A wire coat hanger which has been straightened may be substituted. One wire should be fastened to both sides of one end of the tray, and the other wire will thus support the other end of the tray. These two wires meet in the center above the tray and may be hung over the stove by a hook suspended from the ceiling.

The second and third trays are constructed like the first tray except they have a wire bail at each end attached to the tray by running the wire through holes or screws. The second tray is hung on to the top tray by the bails, and the third tray likewise is hung on the second tray. If desired make a small groove about 1 inch from the edge of the tray to insert the bail so that it will not slip off the tray. If it is impossible to get this wire for the bail a small rope may be substituted.

The wire or rope bail should be long enough to have the trays spaced about 4 inches apart. If the food in the bottom tray, which is nearest the fire, becomes dry first, remove the bottom tray and lower the two top trays so that the food will dry more quickly.

Since this drier will be used in the house, flies or insects should not be a problem; however, a thin cloth could be put over the top around the wire hanger and down around the sides of the trays to protect the food from dust or any possible insects. This cloth will also keep the heat from going out the sides of the tray. When drying small particles of food such as corn, peas, beans, or okra put cheesecloth or other thin cloth in the bottom of the tray to keep the food from falling through the wire. It is also more sanitary when the food is not in direct contact with the wire.



ALTERNATE BAIL FASTENING