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Bill Krier Editor in Chief, WOOD magazine

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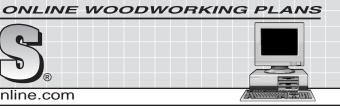
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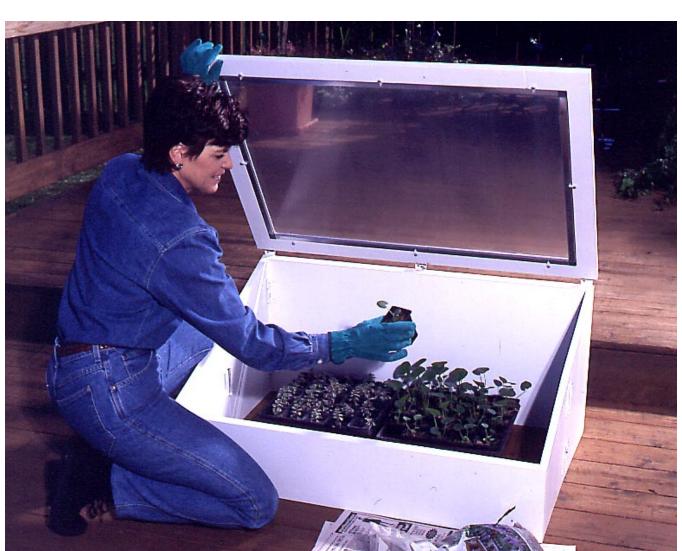


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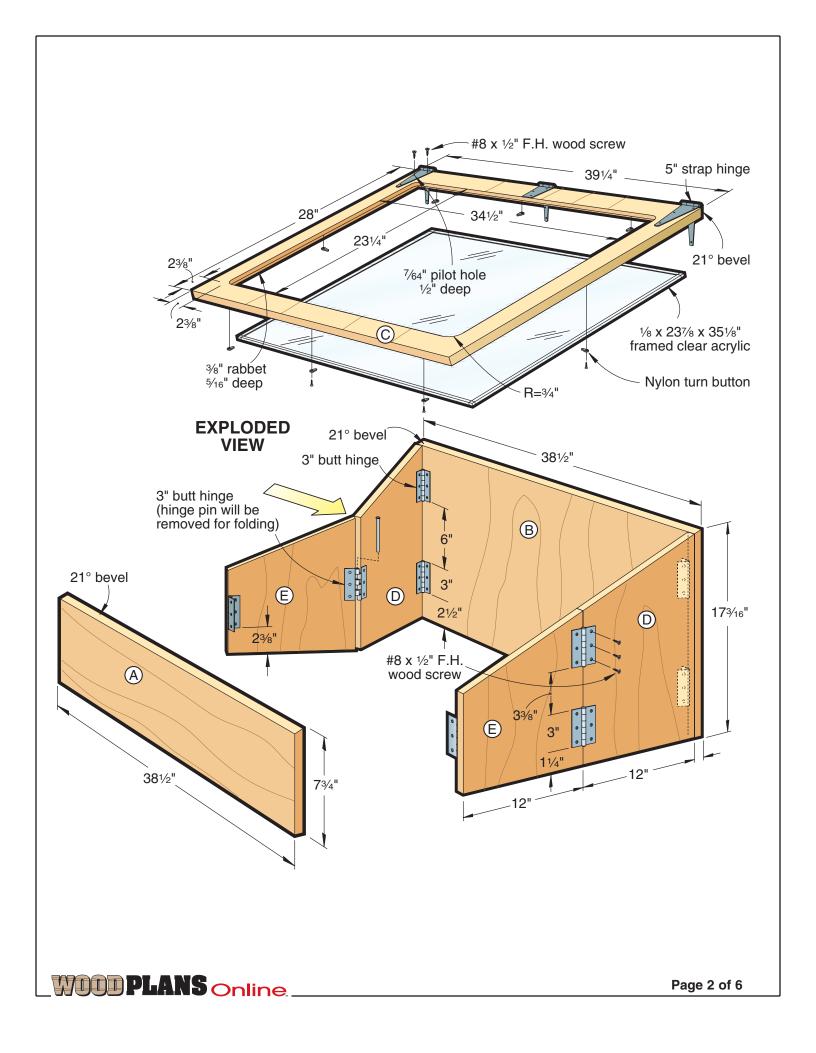




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keep-'em-warm portable Cold Frame

In all but balmy climates, cold frames help protect seedings from spring storms and chill—and they also can extend the growing season into late fall. This one folds for easy storage between the times you need its shelter.

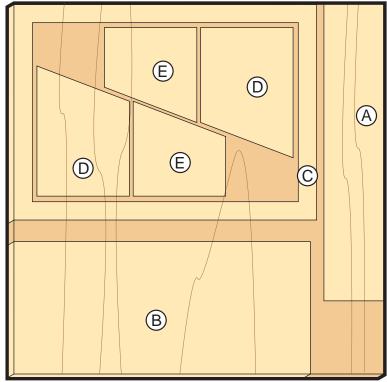


Bill of Materials					
Part	Finished Size			Matl.	y.
	Т	W	L	Me	Qty.
A front panel	3/4"	73/4"	381/2"	Ply	1
B back panel	3/4"	17 13/16"	381/2"	Ply	1
C lid	3/4"	391/4"	28"	Ply	1
D side panels	3/4"	12"	16%"	Ply	2
E side panels	3/4"	12"	125/16"	Ply	2

Material Key: Ply-grade B-C exterior plywood.

Supplies: 5" light strap hinges (3), National N127-605; 3" non-removable pin hinges (10), National N146-373; 3" loose-pin hinges (2), National N227-207; aluminum screen-frame kit; nylon turn buttons (8), Elgar 00081; 2-mil clear plastic; nylon window screen (optional); paint.

CUTTING DIAGRAM



3/4 x 48 x 48" Exterior plywood



Note: You can cut all of the parts from a half-sheet $(4\times4')$ of 3/4" B-C exterior plywood. Select a sheet with as few knots as possible on the C-grade side. It should lie flat, too.

Saw seven plywood pieces

1 Referring to the Cutting Diagram, rip a 7¾"-wide strip for the front panel (A) from one edge of a 4×4' piece of plywood. Crosscut to the length specified for part A in the Bill of Materials.

2 Cut part B to size. Rip and crosscut the remaining piece of plywood to 28×39¼" (the outside dimensions for part C); then lay out on it the inside cutting line for part C.

3 Draw cutting lines for parts D and E in the middle of the laid-out lid (C), where shown on the diagram. (We laid out the parts using a metal yardstick and a fine-point black marker.)
4 Drill a ¼" blade start hole adjacent to the cutting line for the lid opening. Lay the plywood across a pair of sawhorses or other suitable supports, and cut out the lid opening with a handheld jigsaw, as shown in the photo at *right*.

5 Cut parts D and E to shape. **6** Tilt your tablesaw's blade to 21°, and bevel-cut the top of the front panel (A) and back panel (B), where shown on the Exploded View and Side Section View drawings.

7 Bevel-cut the back of the lid (C) where shown. The long side will be the outside surface of the lid.

8 Rout a %" rabbet around the lid opening on the inside where shown. Chisel the rabbet's corners square.

9 Fill any voids that appear in the sawn and routed plywood edges. (We used Durham's Rock Hard water putty as a filler.) Sand the parts smooth.



A handheld jigsaw makes quick work of cutting out parts C, D, and E. Cut close to the line then sand to it.

Hinges hold everything together

1 Lay the parts of one side (D, E) in order on your workbench, the outside facing up. Join them with two 3" hinges, located where shown in the Exploded View drawing. Likewise, assemble the other side.

To install the hinges, lay each one in position. Mark the screw centers for one leaf, and drill pilot holes. Install a stop on the bit to prevent drilling through the side. Drive in the screws; then attach the other leaf.

2 Install a loose-pin hinge on the inside face of each (D/E) side assembly where shown.

3 Connect the front (A) and back (B) panels to the side assemblies with hinges, referring to the Exploded View drawing.

4 Install the lid (C) with three strap hinges, mounted as shown in the Exploded View and Side Section View drawings. Hacksaw the end off one leaf of the center hinge so it will not hang over the opening. (We also drilled and countersank an additional screw hole near the cut-off end.)



Nylon turn buttons hold the interchangeable inserts in the lid. You also can glaze the lid directly with a piece of clear acrylic sheet.

The hinge leaves that attach to the lid must bend down to match the lid's slope. An easy way to do this is to affix the hinges to the back (B), place the lid (C) in position, lift its front edge to make it level, and screw the hinge leaves to it. Closing the lid then bends the hinges to the correct angle.

Paint the frame for outdoor duty

1 Sand all parts to 220-grit. Sand a slight round-over along all edges to prevent splintering.
2 Apply a coat of oil-based exterior primer. Take care to coat the plywood edges. You can

paint over the hardware, paint around it, or remove it and paint under it, as you prefer.

3 Brush on two finish coats of house paint or exterior enamel.

Put plastic in the window

For a traditional cold frame, glaze the lid opening with 1/8"-thick clear acrylic. Cut the plastic to size, place it in the rabbeted opening, and secure it with glazier's points. Caulk around the plastic with glazing compound.

But, as one editor suggested, if the opening had screen mesh in it, the frame could protect strawberries from birds later in

the season. So for the cold frame shown, we made interchangeable lid inserts, using do-it-yourself aluminum window screen kits from a home center. (Elgar Products made the kits we used.) Here's how we did it.

1 Following the kit manufacturer's instructions, assemble two frames that fit inside the rabbeted opening.

2 Install nylon window screening in one frame, following the manufacturer's instructions for pressing in the rubber spline and trimming the screen to size. Using the same procedure, install clear plastic sheeting (we used 2-mil plastic) in the other frame.

3 Secure the window inserts in the lid rabbet with nylon turn buttons, like those shown in the photo above *left*. We installed eight turn buttons, placing them as shown on the Exploded View drawing.

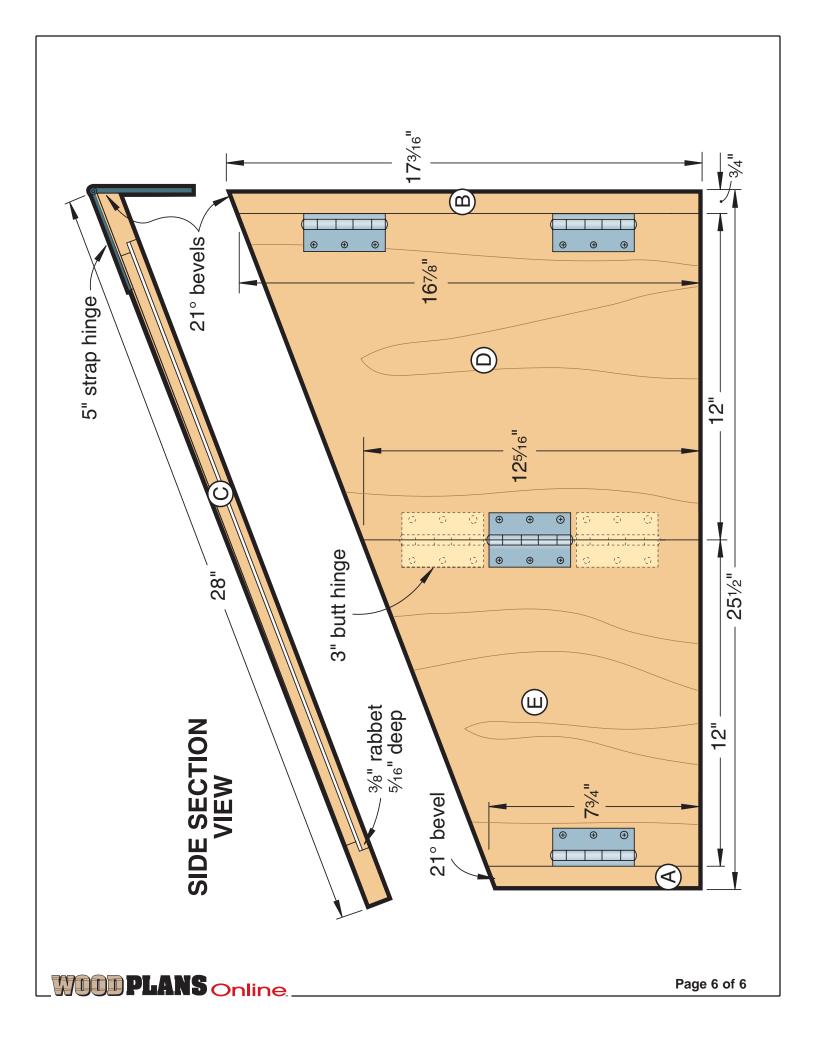
4 From the leftover plywood, cut two sticks about 1" wide and 13" long. Use these to prop the lid open on warm, sunny days so the plants won't cook in your cold frame.

5 To fold the cold frame for off-season storage, pull the pins from the loose-pin hinges on the sides. Flip the lid over against the back. Fold the sides inward to collapse the frame. Stick the hinge pins back in one leaf of each hinge for safekeeping.

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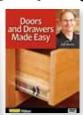
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