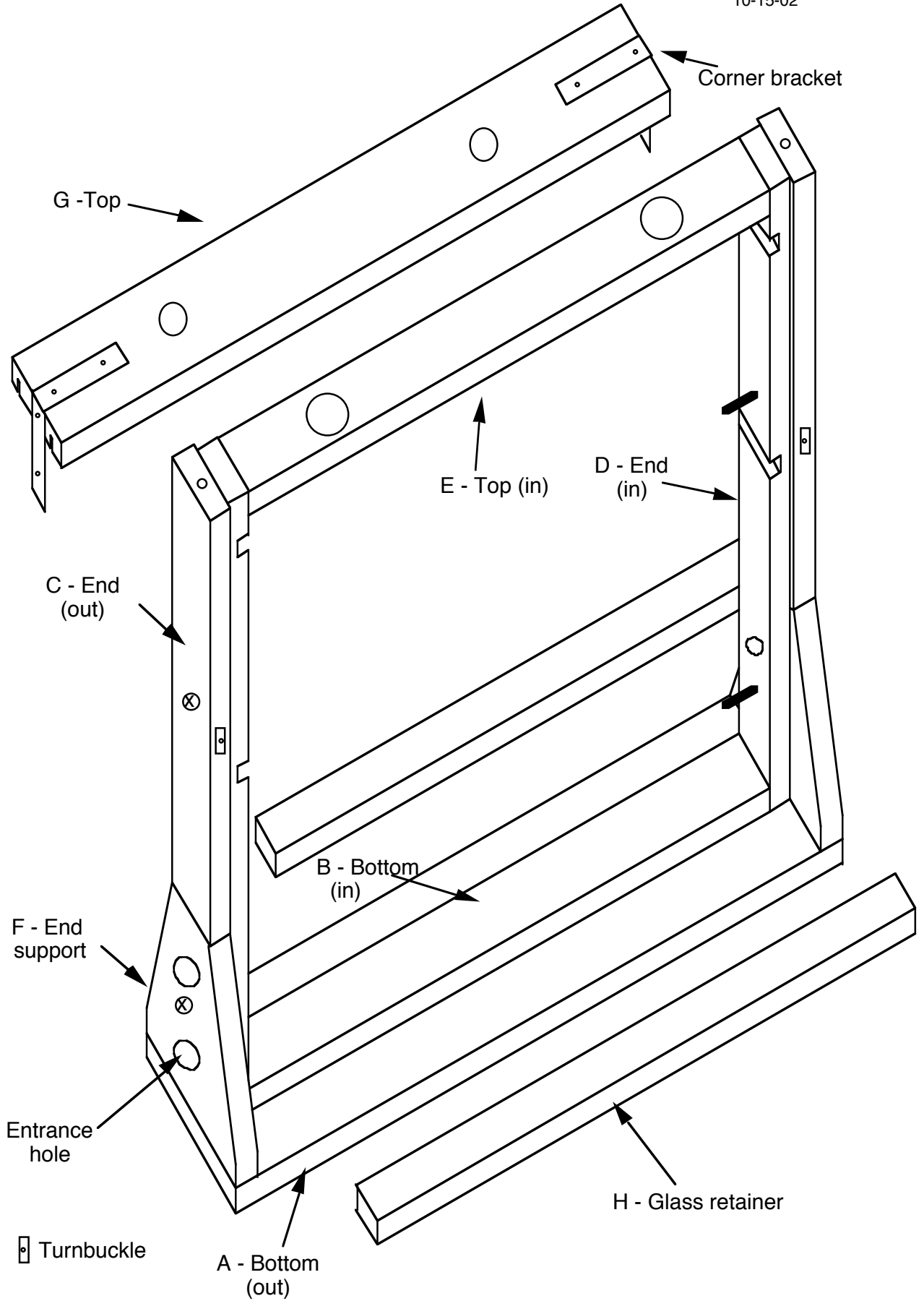


scale 1"=4"

OBSERVATION HIVE 1 of 4

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10-15-02



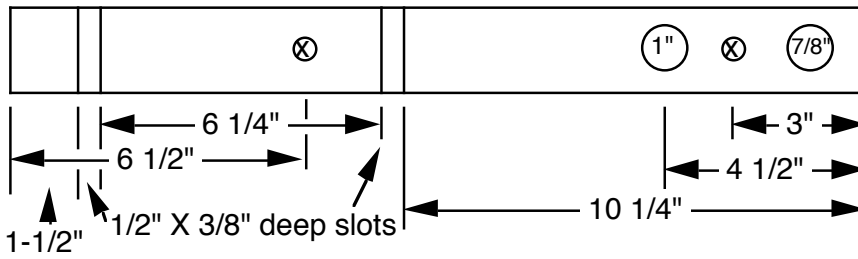
scale 1"=4"

OBSERVATION HIVE 2 of 4

Part dimensions in inches - all made from 3/4" boards

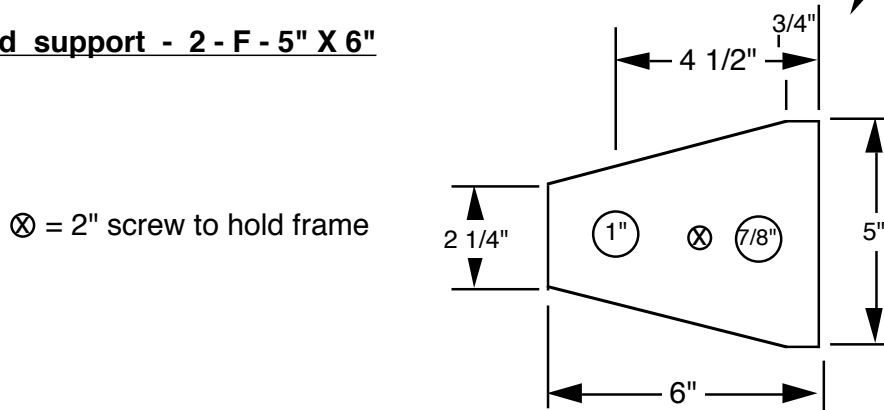
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End (inside) - 2 - D - 1-7/8" X 19"



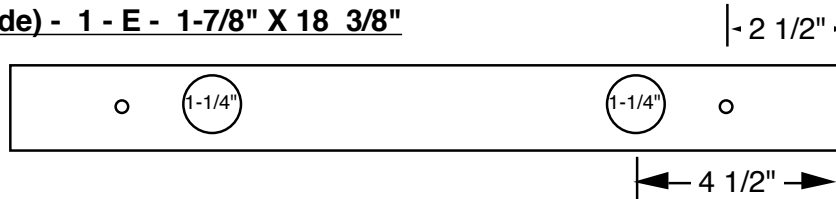
7/8" hole 1-3/16" from bottom centered on one piece only!

End support - 2 - F - 5" X 6"

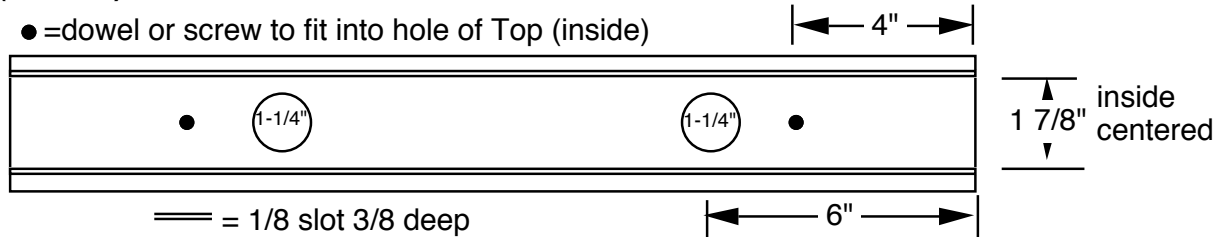


⊗ = 2" screw to hold frame

Top (inside) - 1 - E - 1-7/8" X 18 3/8"



Top (outside) - 1 - G - 3" X 21 3/8"



Material List

#2 pine

- 1 - A - 3/4 x 5 x 21-3/8
- 1 - B - 3/4 x 1-7/8 x 18-3/8
- 2 - C - 3/4 x 2-1/4 x 13
- 2 - D - 3/4 x 1-7/8 x 19
- 1 - E - 3/4 x 1-7/8 x 18-3/8
- 2 - F - 3/4 x 5 x 6
- 1 - G - 3/4 x 3 x 21-3/8
- 2 - H - 3/4 x 1-1/4 x 19-3/4

hardware

- 4 - turnbuckles
- 2 - double strength glass (1/8")
19-1/4" X 19-13/16"
- 2 - 2-1/2" angle brackets
- sheetrock or deck screws

plywood

- 1 - 1/2 x 16-1/4 x 19-7/8

OBSERVATION HIVE 3 of 4

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Construction Instructions:

1. Cut and mill all the pieces. Drill holes after assembly.
2. Fasten and glue pieces with glue and screws. Be sure to drill a hole for the screw in the board it is going through and pilot hole where it is going to hold.
3. Fasten inside end to the inside top and bottom as shown. Be sure they are flat and square.
4. Attach the outside ends as shown. Be sure top is flush and the spacing on either side is equal. This is where the glass will set.
5. Attach the end supports to the inside ends as shown.
6. Fasten outside bottom board making the sides flush.
7. Fasten corner brackets to outside top. put top on and fasten brackets to sides. Making top flush with the outside ends drill holes through inner top into top (from inside) to accept dowels.
8. Drill holes as shown. Drill 1/8" hole for screw to hold frames steady.

NOTE: The edges of the glass are sharp so use care and wear gloves when handling the glass.

9. Remove top. Place glass in side and turn turnbuckles to hold it in.
10. Insert glass retainer up against glass and screw into bottom.
11. Replace top carefully putting glass into slots.

NOTE: To remove glass remove top and glass retainers; open turnbuckle and gently pull glass away. The bees will have propolised the glass so it must be pried gently to get it out without breaking it.

NOTE: If this is used as a permanent observation hive put a piece of 3/4" pipe into entrance hole and position other end of pipe to give the bees access to the outside.

NOTE: The plan can be adjusted to use 2 deep frames by changing the length of the ends to 22" & 16" and change the space between the two slots from 6-1/4 to 9-1/4

OBSERVATION HIVE 4 of 4

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INSTRUCTIONS for Observation Hive

1. Note that the cover and the glass retainers only go on one way. Keep track of how they were on so you can put them on the same way every time.
2. Sand and paint as desired. Do not get paint into the holes for the cover pins or paint the pins. A heavy coat of paint will make them not fit. If necessary clean out the holes and sand the pins.
3. Purchase 2 pieces of double strength glass approx. 19-1/4 X 19-13/16". It is best to bring the hive to the glass supplier and have them fit the glass. It should be 1/16" smaller than the opening and should extend 1/4" up into the cover. Glass is sharp so gloves should be worn to prevent cutting your hands.
4. Remove the cover to put the glass in. Be sure the turnbuckles are open. Place the glass in the hive and turn the turnbuckles to hold it in place while putting on the top and the retainers (see step 5). Once they are in place the glass will remain in the hive even if the turnbuckles are opened. Once the glass is in the bees can not get out even if the top is removed.
5. When the glass is in place hold the glass retainers firmly against it and screw them in. The holes for the screws were not made in advance because the position changes with the amount of paint used.
6. The four screw on the ends are screwed in to hold the frames stable. Be sure to loosen them when removing frames.
7. To remove the glass close the turnbuckles and remove the cover and the glass retainers. Then open the turnbuckles and carefully pull glass away from the hive.
8. To use the hive as a permanent hive remove the screen from the bottom hole on one end and insert a piece of 1/2" PVC pipe. Position the other end of the pipe so bees have access to the outside.

HINTS FOR HIVE USE

For occasional use, insert a frame of bees with brood and queen into hive. Put a frame of honey in the top section. If the bees are out of the hive for less than 24 hours the frame of bees and queen can usually be put right back into the hive. If you use it often it is more convenient to have a small nuc to take the frame from so the queen is easy to find.

For a permanent hive it can be set up by putting a frame with bees and brood including eggs and young larva into the hive and let them raise their own queen. If you have an extra queen available you can introduce that to the hive instead. Permanent hives often require removing or adding brood to keep them at the correct number of bees for the hive. It is helpful to have another hive available that you can switch with.

It is always helpful to have the queen marked in an observation hive.