

The Matchbox T-plans

Homemade Puzzles

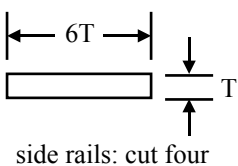
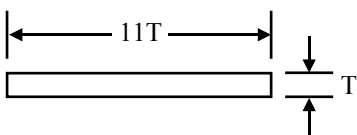
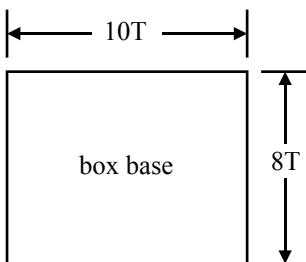
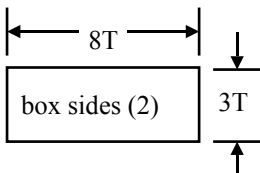
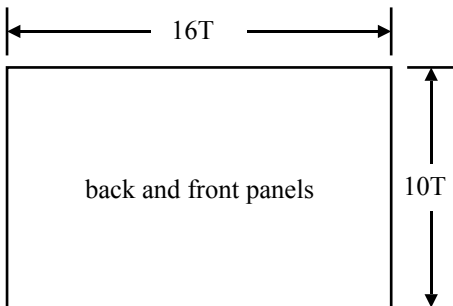
This is a very small puzzle box, measuring only 1-1/4" square and 2" long, yet it takes ten moves to open.
 Very easy to make-every piece is a simple rectangle.
 You could easily make this in a single day.
 No curves, circles, inside cuts, holes or intricate pieces to cut out.
 It can be made from any thickness wood.
 Of course, the thicker the wood, the bigger it will be.



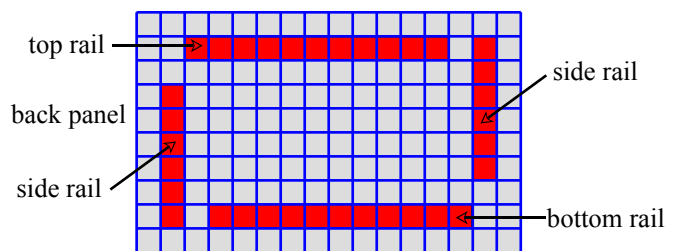
To make the box at the size given above, 1/8" thick wood will have to be used. But you can make this box from any thickness you wish. The thickness of the wood is called "T", and all the dimensions are given in multiplies of T. So if a piece is shown at 16T long by 10T wide, this is 16 times the wood thickness by 10 times the wood thickness.

The inner box.

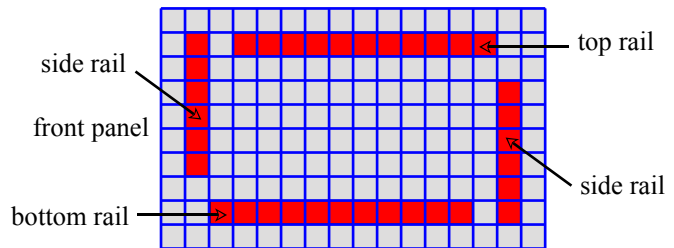
From your wood,
 cut two at 16T x 10T: back and front panels
 cut two at 8T x 3T: box sides
 cut one at 8T x 10T: box base
 cut four at 11T x T: top and bottom rails
 cut four at 6T x T: side rails



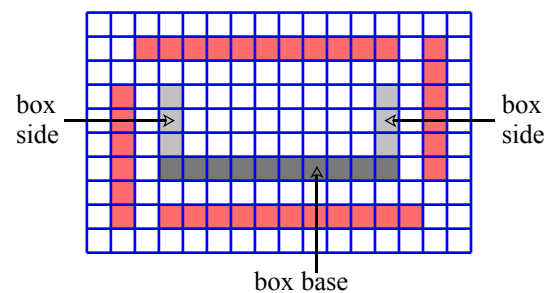
Glue four of the rails to the back panel as shown in this grid. Every little square represents the thickness of the wood (T).



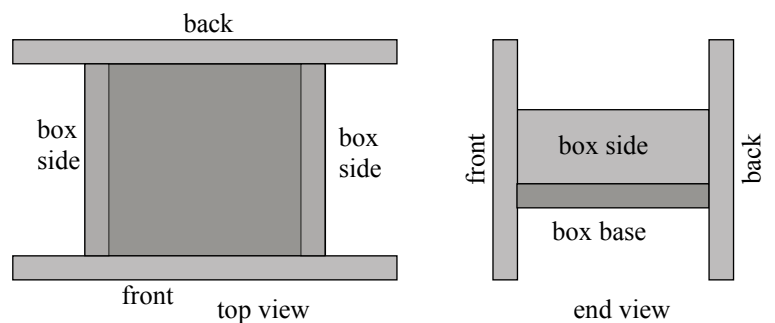
Glue the other four rails to the front panel as shown below. The inside of the front is a mirror image of the inside of the back.



Glue the box sides and base to the back panel:



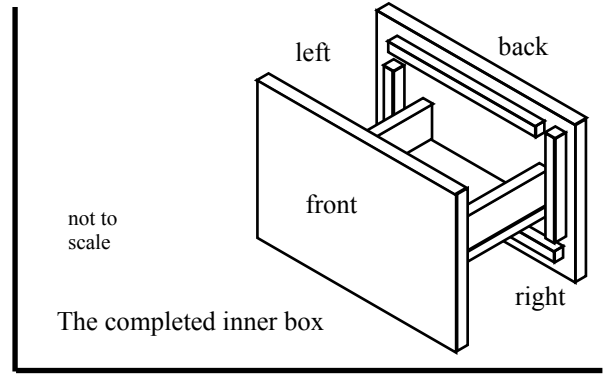
Turn the front panel over, so the rails are facing the back rails, and glue to the front edges of the box.



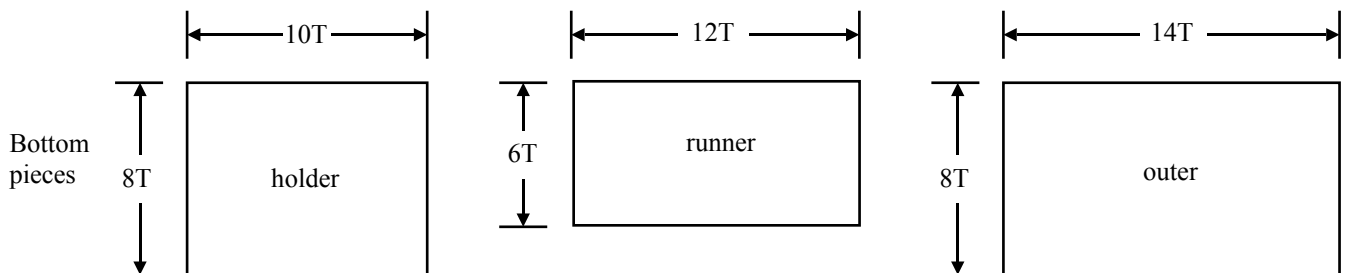
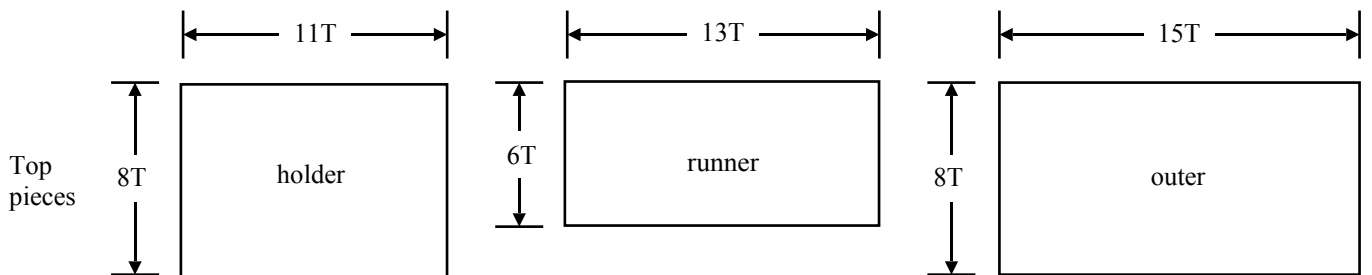
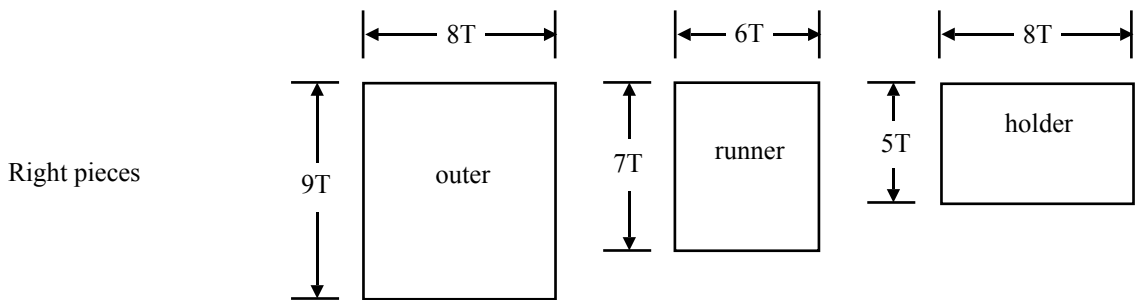
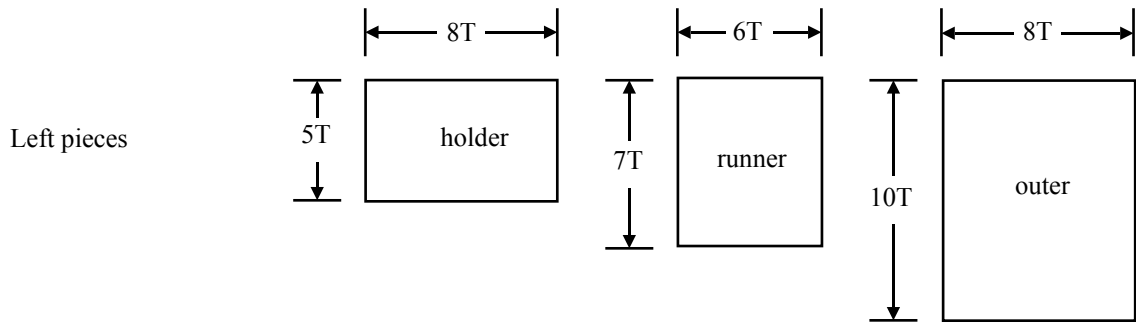
the rails are not shown on these views

The sliding panels

There are four panels that slide along the rails, and each panel is made of three layers: an outer piece, which forms the exterior of the box, a runner piece, which is situated between the front and back rails, a holder piece, which holds all three pieces in place.



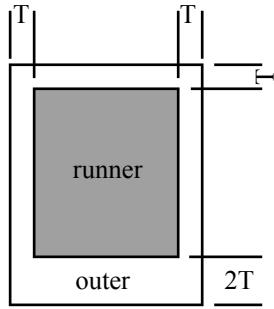
From your wood, cut these twelve pieces:



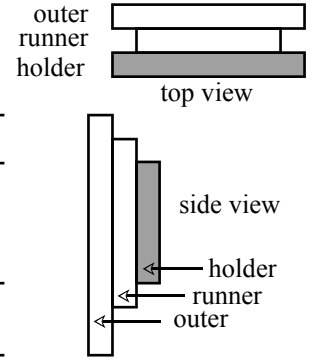
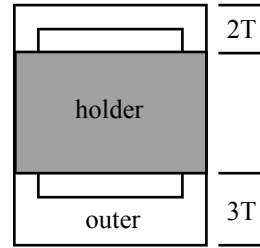
Assemble the panels

Left panels

Glue the runner piece to the outer piece

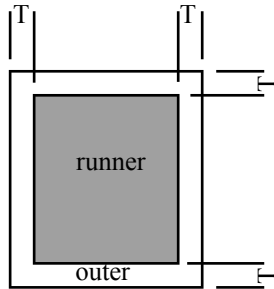


Glue the holder piece to the runner piece

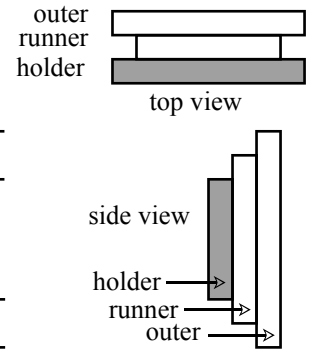
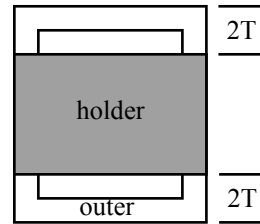


Right panels

Glue the runner piece to the outer piece

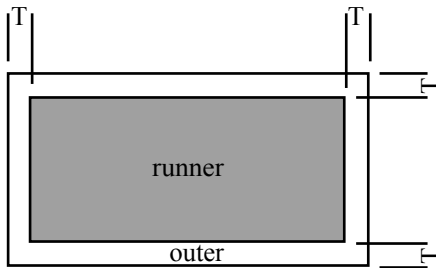


Glue the holder piece to the runner piece

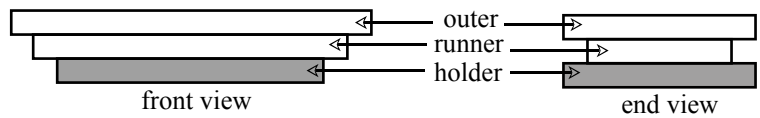
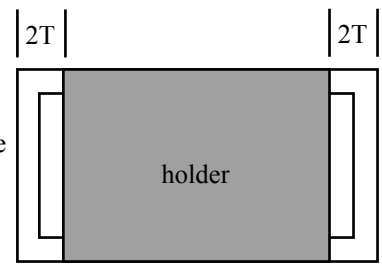


Top panels

Glue the runner piece to the outer piece

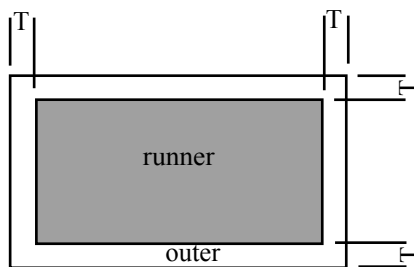


Glue the holder piece to the runner piece

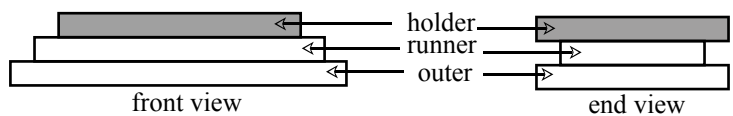
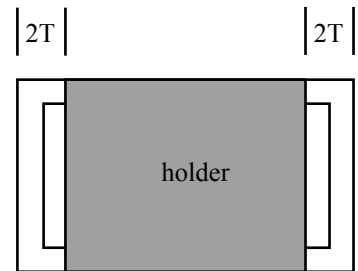


Bottom panels

Glue the runner piece to the outer piece

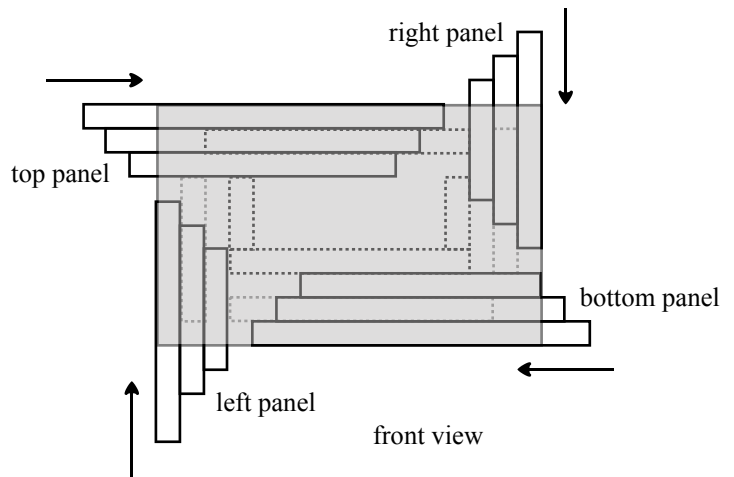


Glue the holder piece to the runner piece

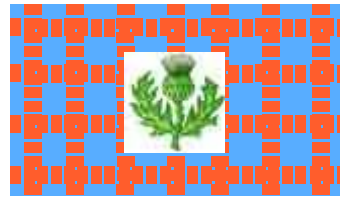
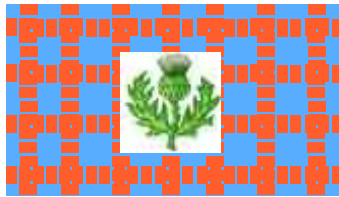
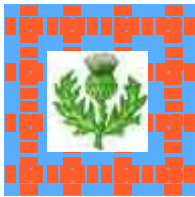


With the front of the box facing you, insert the sliding panels as follows:
 bottom panel from the right (but not all the way),
 right panel from the top,
 top panel from the left,
 left panel from the bottom. Note: there is a slightly larger gap at the bottom part than the top part of the left panel: this larger gap should be at the bottom.

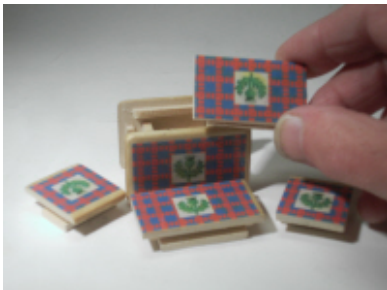
To close the box:
 once all the panels are in place as shown:
 push the bottom panel left,
 the the right panel down,
 the top panel right,
 the left panel up.
 Continue this sequence until the box is closed.



For the finish, I printed some patterns, and sprayed them with Artist's Fixative. After taking all the panels off the box, glued the patterns onto the panels. While the panels were still off, I put two coats of clear glaze onto the outside faces. If you've made this box from 1/8" wood, this suggested pattern will exactly fit each panel. Two of each are required. There are a couple of extra patterns on the "The Matchbox patterns" pdf file, on the website.



My thanks to Donato De Cristo for his drawings, photos and video of the "1 sun 14 move" puzzle box.



What can you put in this tiny box?
 A couple of rings, perhaps....
 A (very) small coin...
 You CAN put matches in, if you
 break them in two...

If you find any mistakes in these plans,
 please let me know, so that I can correct them.

Enjoy this puzzle!

These plans are free.
 If you sell or give away this puzzle,
 please mention where the plans came from.
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