

Project 12284EZ: 19th Century Kitchen Clock

Called a Kitchen Clock, this was a popular item in the late 1800s. In fact, millions were made and sold. The original was made of walnut, but we made this one out of red oak.

If possible, select quartersawn oak for the scrollwork (parts F and H), as it is less likely to cup later on. Also, make sure the stock is well dried.



19th Century Kitchen Clock Materials List

Part	Description	Size	No. Req'd
A	Side	1/2" x 3-1/2" x 14-1/2"	2
B	Top	1/2" x 3-1/8" x 7-1/4"	1
C	Bottom	1/2" x 3 x 7-1/4"	1
D	Base	1/4" x 4-3/8" x 13-1/4"	1
E	Back	1/2" x 7-1/4" x 14-3/8"	1
F	Upper Scroll	3/8" x 9" x 13-1/2"	1
G	Rosette	See detail.	1
H	Side Scroll	3/8" x 2-1/4" x 7-3/4"	2
I	Bracket	See detail.	1
J	Top Cleat	1/2" x 1/2" x 5-1/2"	1
K	Side Cleat	1/2" x 1/2" x 2"	2
L	Molding	See detail.	as req'd
M	Door Side	1/2" x 7/8" x 12-3/4"	2
N	Door Bottom	1/2" x 7/8" x 7-1/3"	1
O	Door Top	1/2" x 7/8" x 3-1/8"	3
P	Glass	1/8" x 6-1/8" x 13-5/8"	1
Q	Movement	Obtain from clockmaker's supply store.	1
R	Gong	Obtain from clockmaker's supply store.	1
S	Dial Plate	Obtain from clockmaker's supply store.	1
T	Paper Dial	Obtain from clockmaker's supply store.	1
U	Hinge	3/4" x 3/4"	1
V	Catch	as req'd	1

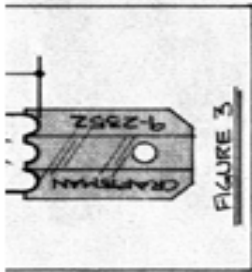


FIGURE 3

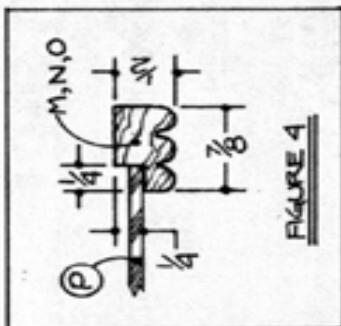
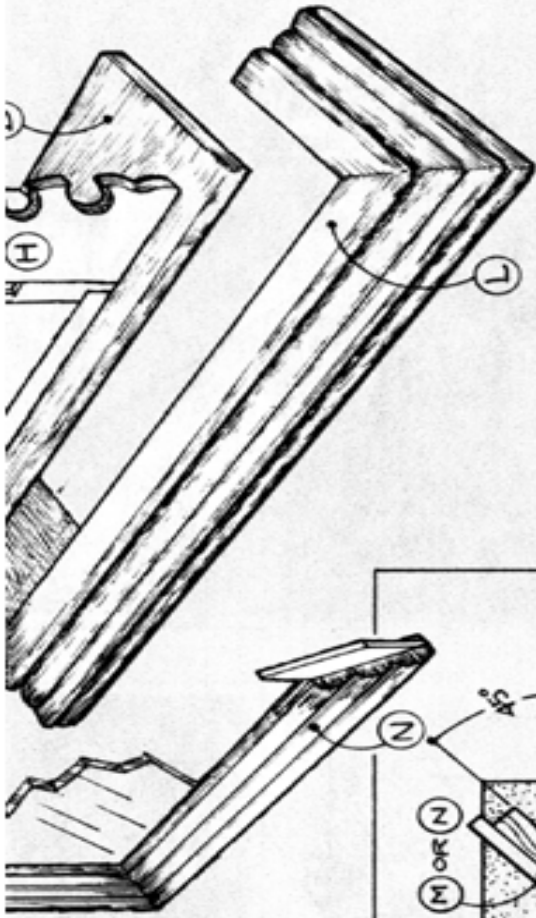


FIGURE 4

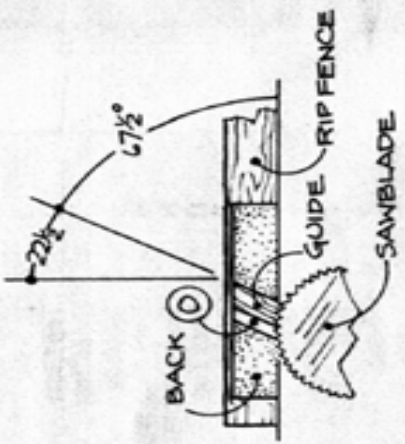
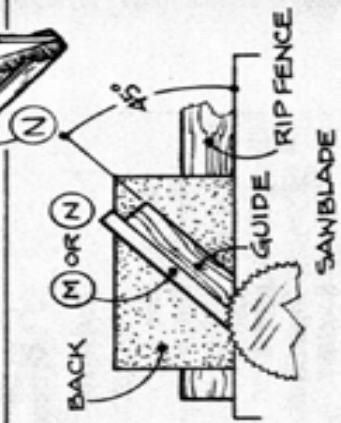


FIGURE 5

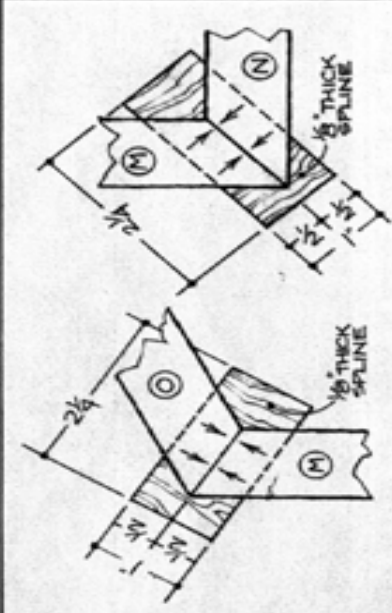
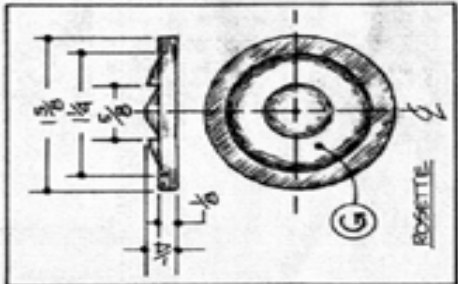
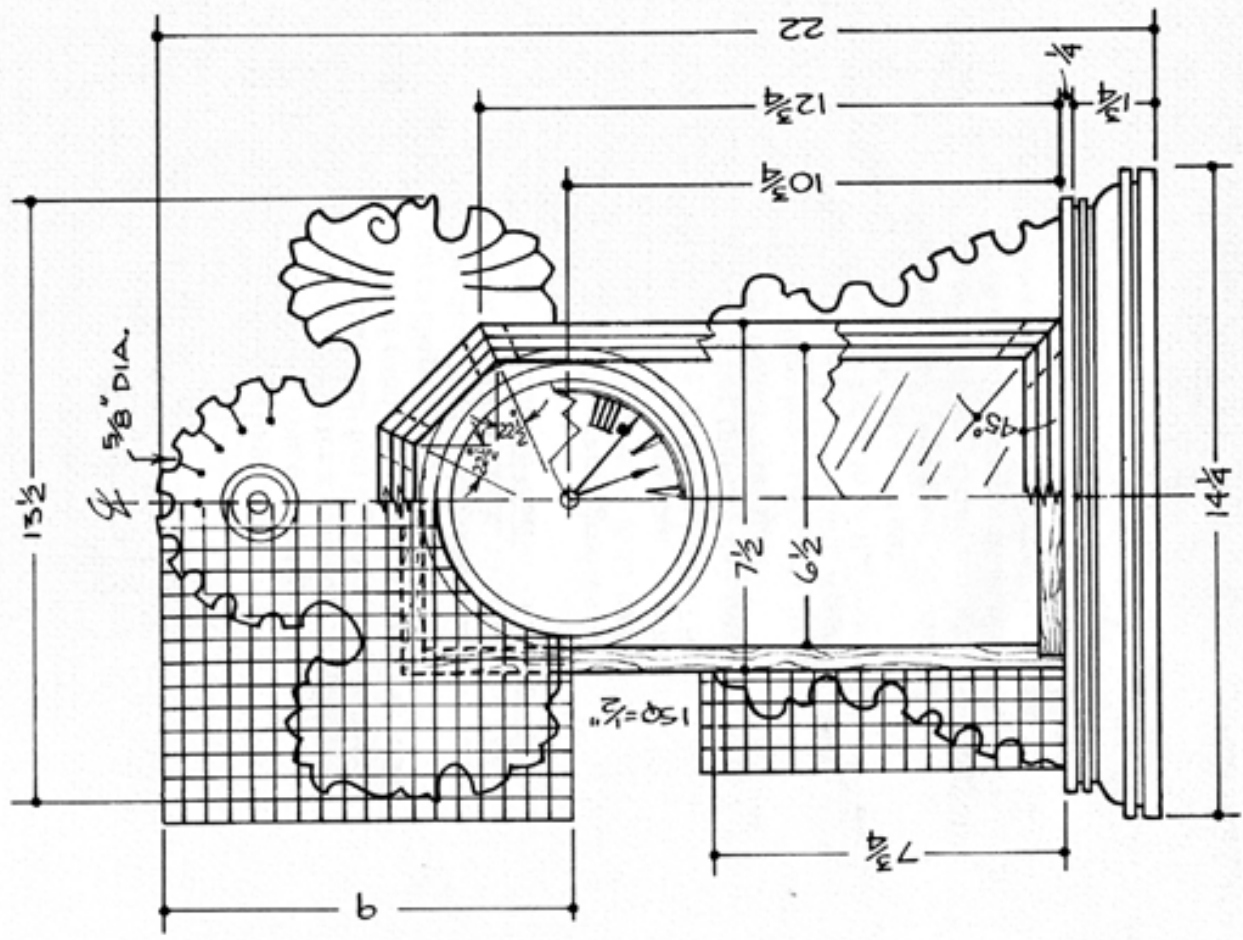
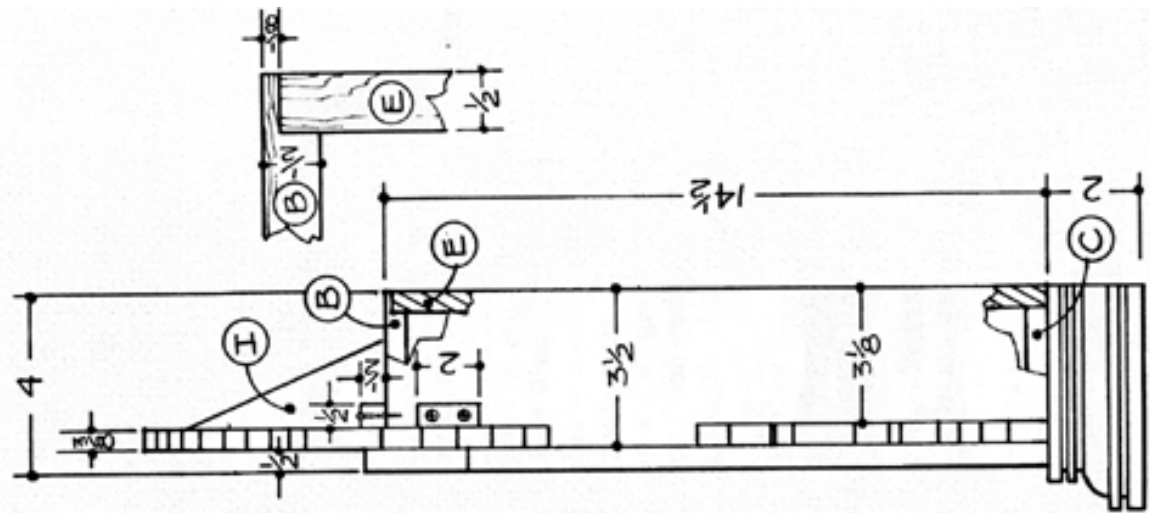


FIGURE 6

ARROWS SHOW DIRECTION OF CLAMP PRESSURE



19th Century Kitchen Clock Step-by-Step Instructions

1. Select a piece of 1/2" thick stock from which to cut the sides (A).
2. Cut the stock overall length and width as shown.
3. Use the table or radial-arm saw with a dado-head cutter to make the 1/2" wide by 3/8" deep rabbet along the top, bottom, and back edges.
4. Cut the 3/8" x 3-1/2" notch on the front of parts A in the same manner.
5. Give parts A, B, and C a complete sanding.
6. Assemble parts A, B, and C with glue and clamps.
7. Check for squareness and adjust if necessary.
8. Allow to dry thoroughly.
9. Remove the clamps.
10. Sand the outside of the case, giving particular attention to the joints to insure that the mating surfaces are flush.
11. Trim a piece of stock 1-3/8" thick x 3" wide x 36" long from which to make the beaded molding (see **Figure 1**).
12. Obtain a molding-head, a three-bead cutter, and a 1/4" - 1/2" quarter-quarter round cutter.
13. Use countersunk screws to attach an auxiliary plywood fence, at least 3/4" thick, to the rip-fence so that the rip-fence overlaps the cutter, a necessary factor in making this type of molding.
14. Remove the regular table saw inset, as it cannot be used with the dado-head.
15. Cut a piece of 1/4" thick x 3" - 4" wide plywood to approximately the length of the rip fence. This will replace the regular inset.
16. Set the molding-head cutters below the level of the tabletop.
17. Clamp the plywood to the saw tables.
18. Equip the molding head with the beading cutters to begin making the beading cut.
19. Lower the cutters below the level of the tabletop.
20. Locate the rip fence and auxiliary fence for the cut.
21. Set the plywood inset against the fence.
22. Clamp the inset to the saw table.
23. Start the saw.
24. Raise the cutters slowly so they are slightly higher than the needed depth of the cut.
25. Lower them to exact cutting height and cut through the inset.
26. Replace the dado-head with a regular saw blade.

27. Cut the stock to a width of 1-1/2".
28. Locate the rip fence to cut section Y to a thickness of 11/16".
29. Adjust the rip fence again to cut section X to 7/16" thick.
30. Adjust the rip fence one last time to cut part X to 1" wide.
31. Select a 3" wide x 36" long section of stock from which to cut section Z.
32. Cut section Z using the same procedures you used to cut sections X and Y.
33. Use a regular saw blade to rip the molding stock to a width of 1-1/4".
34. Glue and clamp sections X, Y, and Z.
35. Allow the glue to dry.
36. Sand any rough areas.
37. Cut to length with mitered corners.
38. Apply a coat of glue to the miters.
39. Use a clamp and the easy-to-make jig shown in **Figure 2** to apply pressure.
40. Hand plane thicker stock to the 1/4" thickness needed to make the base.
41. Cut the stock to final length and width.
42. Sand thoroughly.
43. Use glue and clamps to join part D to the molding.
44. Use glue and 5/8" x #6 flat head wood screws to join the case (parts A, B, and C) to the base. **NOTE: The back of the case is flush with the back of the base.**
45. Select 3/8" stock from which to make the scrollwork (parts F and H).
46. Transfer the profile to the stock.
47. Use a 5/8" diameter drill bit to form the nine 5/8" diameter curves along the top of part F.
48. Use a jig saw to cut out the profile.
49. Sand all surfaces, taking special care to smooth the edges.
50. Lay out and mark the location of the incised lines.
51. Use a "V" groove carving tool to form the cuts.
52. Final sand.
53. Glue the side scrolls (parts H) to the case.
54. Use cleats (parts J & K), glued and screwed to the case as shown, to secure the upper scroll to the case.
55. Faceplate-turn the rosette (part G).
56. Glue the rosette in place.
57. Final sand all surfaces.
58. Stain as desired.
59. Apply two coats of Deft spray finish.
60. Obtain parts Q, R, S, and T from a clockmaker's supply store.

61. Cut the back (part E) to size.
62. Use four 3/4" x #4 brass round head screws to secure the back to the case.
63. Use disc adhesive to glue the paper dial (part T) to the dial plate (part S) with disc adhesive.
64. Use a pair of small sheet metal screws to join the dial plate to the back side of the upper scroll (part F).
65. Place the case on its back and place the movement inside.
66. Assemble the upper scroll (with part S in place).
67. Align the movement with the holes in part S.
68. Remove part S.
69. Use 1/2" x #5 pan head screws to join the movement to the back.
70. Reassemble part S.
71. Select two 36" lengths of stock from which to make the beading on the door frame (**Figure 3**).
72. Use the same procedure you used to make the molding and the molding-head cutter to cut the beading.
73. Use the dado-head cutter to apply the 1/4" x 1/4" rabbet as shown in the cross-sectional view (**Figure 4**).
74. Cut parts M, N, and O to length, mitering the corners as shown.
75. Select one of the jigs shown in **Figure 5** to use when adding splines to the mitered butt joints.
76. Select a piece of 3/4" thick stock to glue to a piece of 3/4" thick particle-board or plywood to make the jigs.
77. Add 1/8" thick splines to each mitered butt joint to increase their strength.
78. Set the table saw to a height of 1/2".
79. Locate the rip fence so that the saw cut to make the 1/8" thick spline grooves centered along the 1/2" width of the stock.
80. Clamp the stock to the jig.
81. Hold the jig firmly against the rip fence and, keeping hands away from the blade, push the jig through the saw blade.
82. Determine how to place the 1/8" splines so that each runs perpendicular to the joint line.
83. Cut each spline to a width of 1" and a length of 2-1/4" (see **Figure 6**).
84. Glue the spline to one half of each joint and allow to dry.
85. Glue and assemble the second half.
86. Clamp a hand screw on each side of the joint line, then use a third clamp to pull the two hand screws together to apply light clamp pressure to the joint line as shown.

87. Allow the glue to dry.
 88. Repeat the procedure for each of the spline joints.
 89. Trim and sand the splines flush.
 90. Stain and finish to match the case.
 91. Select glass to place in the door and have it cut.
 92. Use several glazier (triangle points) to secure the glass to the inside of the frame.
 93. Use a pair of small brass hinges to secure the doorframe to the case (parts U).
 94. Add a brass catch (part V) to complete the project.
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