

# How To Install Bessler Model 20 Disappearing Stairway

All Bessler Disappearing Stairways are designed for easy operation, safe and convenient use. These instructions are intended to speed your assembly and installation, and allow you to understand the Bessler system and how it works. If you will read all the instructions, study the drawings, check the parts for correct dimensions (sometimes hardware may get bent in shipping or rough handling), it will save considerable time in assembly and installation, and can add years of life to your stairway.

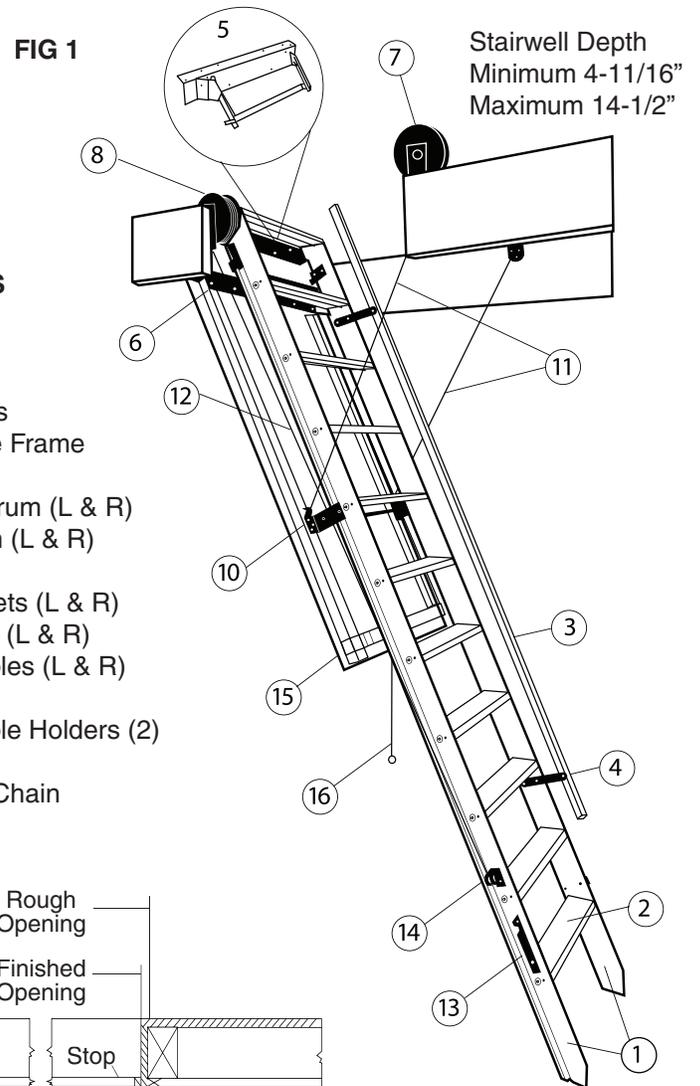
Before starting installation, we suggest you study FIG 1 and acquaint yourself with all the numbered parts and get a mental picture of the completed stairway.

**STEP 1.** Prepare the finished opening for the size as shown in FIG 6. Finish the opening with all four jambs (not supplied by Bessler) even with the top of the attic floor as shown in FIG 2 and with all corners plumb and square.

**STEP 2.** Remove the guide frame (Part 5) and panel bracket (Part 10) from the hardware carton. To make sure these parts have not been damaged in shipping, measure the distance between the slide bars on the guide frame and the slide bars on the panel bracket. These two dimensions should be  $16\frac{5}{8}'' \pm 1/32''$ , and slide bars should be parallel to each other.

**STEP 3.** Remove the door panel from carton and make certain this part has not been damaged in shipping or handling. To install door panel (Part 15), see FIG 3, draw a line  $1\frac{5}{8}''$  above the bottom edge of finished jamb all the way across the header where the door panel will be hinged. Drive two small nails half way through the jamb on the line to act as a guide to hold the hinge against when fastening hinge to jamb. While your helper holds the door and hinge against the nails above, center the hinge between the side jambs, and partially drive two more nails through screw holes in hinge. This will hold door in position while you complete installation using #10 x 1" P.H. screws in rest of holes.

**STEP 4.** Install guide frame (Part 5) by hooking the angle on top of the attic floor in the center of the finished opening, directly above the door hinge, as shown in FIG 4. Attach with #10 x 1" P.H. screws. After all screws are tightened and guide frame has been set firmly in position, re-measure between the faces of the slide bars to make certain they are still  $16\frac{5}{8}'' \pm 1/32''$  and also parallel. If any adjustment is needed, now is the right time to do it. Grip the slide bar with vice grips, crescent wrench, or other tool, and bend as necessary to set slide bars at  $16\frac{5}{8}''$  apart and parallel when measured from face to face.



## LIST OF PARTS

1. Stringers (2)
2. Treads
3. Handrail
4. Handrail Posts
5. Header Guide Frame
6. Piano Hinge
7. Panel Door Drum (L & R)
8. Stringer Drum (L & R)
9. No Item
10. Panel Brackets (L & R)
11. Door Cables (L & R)
12. Stringer Cables (L & R)
13. Catch Lock
14. Stringer Cable Holders (2)
15. Door Panel
16. Door Panel Chain

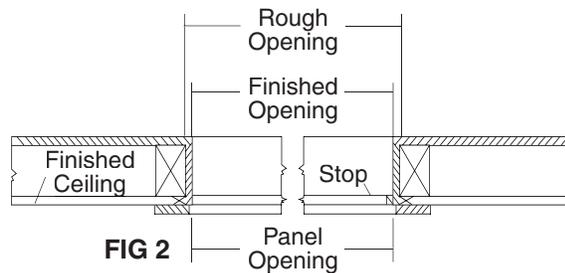


FIG 2

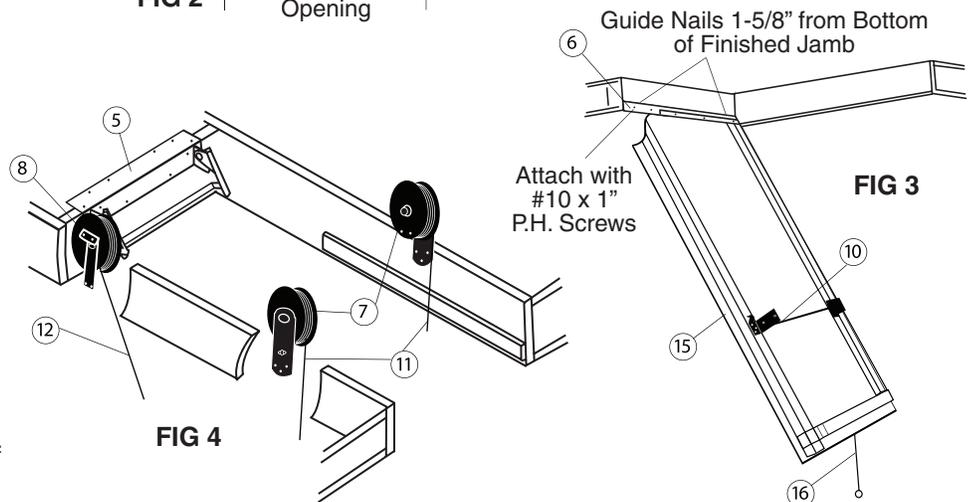


FIG 3

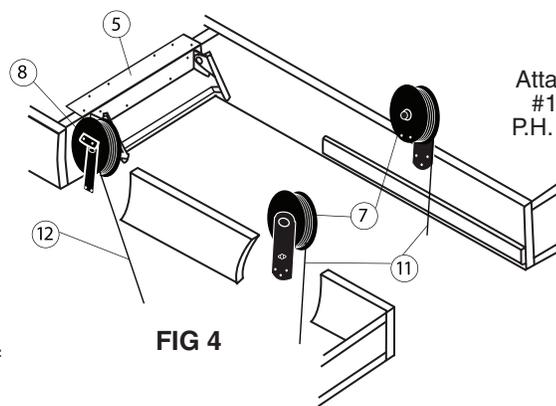


FIG 4

**STEP 5.** Install panel drums (Part 7) on both sides of finished opening as shown in FIG 4, making sure centerline of each drum is 30" from the header and that the small tab on the drum mounting bracket sits on top of the attic floor. Positioned correctly, the top of the drum will be above the attic floor. Secure each with four #10 x 1" P.H. screws. (NOTE: Parts designated left or right is from a position facing the front of the lowered ladder.)

**STEP 6.** Install the stringer drum (Part 8) on the left side of the finished opening with the centerline of the drum 5" from the header with the short angle of the bracket resting on the attic floor. Secure with four #10 x 1" P.H. screws.

**STEP 7.** Remove wringers and handrail from long carton. Put the handrail aside for the time being. Lay the stringers on edge on the floor or on saw horses opposite each other with the tread gains or slots toward the inside. Starting at the bottom, insert the treads and ladder rods in all slots except the top three, which will be inserted later. Further secure treads with two #10 x 1" P.H. screws. (You may want to drill a pilot hole to assist in driving screws.) Make certain the treads are seated at the bottom of the gains, as the treads have been cut to 16-1/16" length and act as a spacer for the proper width of the ladder, which will be 17-1/16" wide to the outside upon completion. The three top treads will be installed in Step 9.

**STEP 8.** Install panel bracket (Part 10) to the ladder by bending stringers inward at the top where the three treads have been left out and insert slide bars into the grooves at the outside back edge of the ladder as shown in FIG 5. When installing be certain that the pin that extends from side of panel bracket is on the left side of ladder and let panel bracket slide to bottom of ladder for now. (Important: Flex stringers inward to install panel bracket and guide frame to prevent changing of slide bar dimensions which have been pre-set at the factory to 16-5/8" +/- 1/32".) With one person in the attic to guide ladder into the guide frame (Part 5) so that the top stops are above the slide bars on the guide frame, again flex the top of the stringers inward to engage guide frame slide bars into grooves.

**STEP 9.** Slide ladder upward and install remaining treads and tighten all ladder rods. (NOTE: While standard treads have grooves cut in the surface and are made from 1" x 4", the top tread has a flat surface and is made from 1" x 6" .) Pull the ladder all the way down until top tread is level with the attic floor and the top stops are engaged with the flat bar on the guide frame. The top stops engaging this part of the guide frame is important as this provides the load bearing capability of the top portion of the ladder.

**STEP 10.** Swing door panel to ladder and slide panel bracket up to meet pre-drilled holes in door braces. Secure panel bracket with six #10 x 1" P.H. screws.

**STEP 11.** Install cable holder (Part 14) on ladder with 1/4" x 20 x 1-1/4" R.H. stove bolt through pre-drilled hole at second tread from the bottom of left stringer.

**STEP 12.** Assemble and install handrail (Part 3) and brackets (Part 4) using #10 x 3/4" P.H. screws. Install as shown in FIG 1 on either side of the ladder with the top bracket about 6" below the top tread. (The handrail can be installed further down on the stringer or even shortened if space is not available for normal installation.)

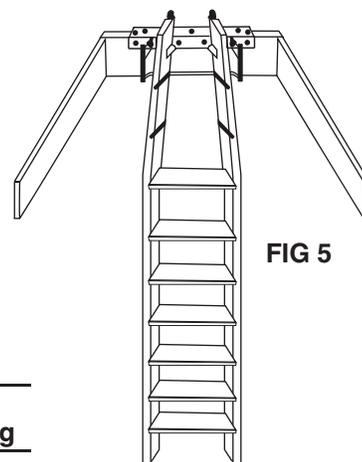
**STEP 13.** Attach panel drum cables by removing tape that is around one of the drums and discard. (Important: Be Certain All Cable Is Wound Tightly Around Drum Before Continuing.) Firmly grasp the end of cable, allowing the drum to rotate, pull the cable down to the panel bracket and hook into the slot on appropriate side. Same procedure for opposite side. (NOTE: Only minimum tension is needed on these drums.)

**STEP 14.** Attach stringer drum cable by removing tape that is around drum and discard. Take the end of the cable in one hand and pull off enough cable to cause the spring drum to rotate three turns. Firmly grasp the drum with your other hand and **re-wrap** the three turns of cable onto the drum, and at this point, pull the end of the cable down the side of left stringer and place knot into slot on cable holder.

**NOTE:** If it is necessary to adjust tension on any of the drums, unhook cable, and allow it to wind up slowly on the drum, and without losing the initial tension, add or remove a wrap of cable as required and replace cable to holder. Keep tension on both sides of panel drums as equal as possible. Repeat if necessary, being careful not to let the cable slip from hand as this may break or backwind the spring.

**SUGGESTED MAINTENANCE:** Lubricate spring drum axles and slide grooves on ladder annually or as needed. Replace cables is they become frayed.

**PLEASE KEEP THIS FOLDER AS IT CONTAINS A PARTS LIST:** When ordering parts, give Model No. of stair, name and number of part needed, and state whether for left or right side of stair. Send inquiries to Bessler Stairway Co., 3807 Lamar Ave., Memphis, TN 38118. Phone (901) 795-1253



**FIG 5**

**FIG 6**

Size	Floor to Floor	Radius Above	Plumb Height Above	Run Below	Opening
1	7'7" to 7'10"	4'9"	4'2"	3'9"	2' x 4'
2	7'11" to 8'4"	5'2"	4'7"	3'11"	2' x 4'
3	8'5" to 8'10"	5'8"	5'1"	4'2"	2' x 4'
4	8'11" to 9'4"	6'2"	5'7"	4'5"	2' x 4'