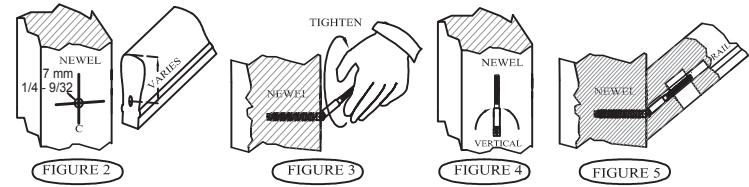
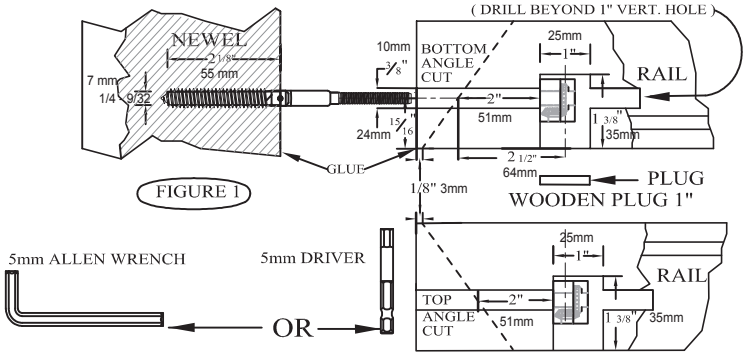


# ZIPBOLT UT

# ANGLED RAILBOLT



- Cut rail 90 degrees square. Then mark proper angle on railing 1/8" (3mm) in from end of 90 degree cut. (FIG 1)
  - Mark center of rail on 90 degree cut, up 15/16" (24mm) from bottom rail (FIG 1)
  - Drill a 1" (25mm) DIA. hole in in bottom of rail on center line 2 1/2" (64mm) from where the angle and 15/16" (24mm) dimension intersect. Hole should be 1 3/8" (35mm) deep.
  - Drill a 3/8" (10mm) DIA hole in end of rail. Hole should be 3" - 3 1/2" (76mm - 89mm) deep drilling past 1" (25mm) hole (FIG 1) . **It is very important that the 3/8" (10mm) hole is drilled before cutting the angle on the rail.**
  - Measure 1/8" (3mm) in from end of 90 degree cut in rail. Mark to the correct pitch and start the cut at that point. (FIG 1)
  - Measure distance from the top of rail to center of 3/8" (10mm) hold on pitch cut. (FIG 2)
- Drill 1/4" pilot hole or 9/32" (7mm ) for hardwood 2 1/8" (55mm) deep. (FIG 2) Ream hole larger if needed for hardwood. (Tip: add touch of wax or grease to help when inserting lag into newel)**
- Install rail bolt in post with 2 7/8" (73 mm) of bolt protruding. (FIG 3) Verifying that the bolt ends in the vertical position (FIG 4)
  - Slide rail on to bolt and "dry fit" to be sure of proper angle and fit. If another cut is needed take the least amount off to correct cut . (FIG 5) The 3/8" (10mm) deep hole that was drilled has allowed enough room for you to make this adjustment.
  - When proper fit is complete, glue, insert gear head and tighten into place with 5mm driver or allen wrench. Glue and insert a wooded 1" (25mm) DIA plug. Sand flush with bottom of rail.

