

## Another Make-It Yourself Bassoon Guard

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Arthur L. Gudwin's article "A Make-It Yourself 'Belly Guard' (*The Double Reed* Vol. 11, No. 3, Winter 1988) presents a unique solution to a predicament experienced by many bassoonists: clothing interfering with the mechanism on the bassoon boot joint. In this article a modification of Gudwin's belly guard is presented below. The new bassoon guard is considerably smaller than Gudwin's, and thus may be stored inside the bassoon case between the disassembled joints of the bassoon. In addition, since the modified guard has less protruding cork material it is perhaps more durable than Gudwin's guard. Please note that the directions below are for constructing a bassoon guard which overlaps the large metal guard over the boot joint Bb-key mechanism found on many Heckel bassoons. For a picture of this metal Bb-key guard see Photo 1 in this article, or also see Photo 1 on page 25 of the Gudwin article. The directions below will have to be modified for bassoons with a different Bb-key guard.

### Materials

1. Plexiglas 1/4" thick cut to 6 5/8" long and 2 1/2" wide (hardware store). Round the corners as desired.
2. Cork sheets 1/8" thick and 1/32" thick. A hobby shop might carry this or you may order them from Eric Brand 800-348-7588, 219-293-6031.
3. One round cork (wine bottle).
4. Instant glue (cyanoacrylate glue) "Crazy Glue," "HotStuff," "Jet," or "Zap" (hobby shop).
5. "Zip-Kicker" spray-optional (hobby shop). This is an accelerator for instant glues. In some cases, though, the bond may not be as strong as if the glue is allowed to cure more slowly.
6. One 3/8" (approx.) button. Find a plastic button which fits into the hole in the Heckel Bb key guard.
7. One small hinge (1").
8. 18 gauge utility wire (hardware store).
9. One wall hanging picture hook. Find one capable of supporting 50 pounds weight.
10. One 1/2" long spring. The spring from a retractable ball point pen works nicely when trimmed to the proper length.
11. A thin (approx. 1/32") strip of leather.
12. One rubber band.
13. One small piece of felt—optional.
14. One metal hook from an old neck strap, or make a hook from the 18 gage utility wire.

### Directions for Construction

Step 1: Smooth all of the edges of the plexiglas. You may wish to have a greater taper to the top of the guard (see Figure 1.). Drill a 1/4" hole in the upper left corner of the Plexiglass (for the rubber band).

Step 2: Cut from each cork sheet a rectangle measuring approximately 1 3/8" x 6/8". Then cut from each cork sheet a rectangle measuring approximately 2 1/2" x 6/8".

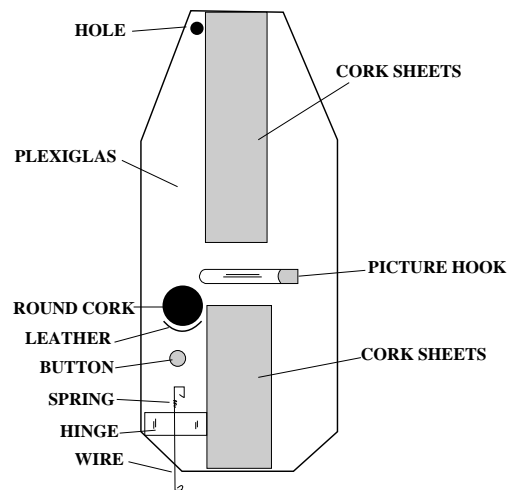
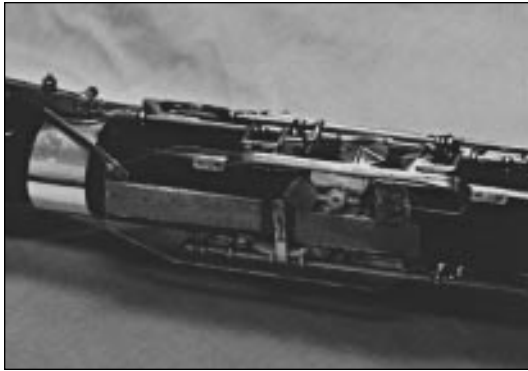


FIGURE 1: Diagram of the Bassoon Guard.

Step 3: Glue the 1/32" cork rectangles onto the plexiglass as shown in Figure 1. Spray with "Zip-Kicker" to speed up the drying of the glue. After the glue has hardened, glue the 1/8" cork rectangles on top of the 1/32" corks.

Step 4: Clip the curved portion of the picture hook so that the curved portion is no longer than 3/8" long. Round the edges and smooth the edges of the whole hook—especially the curved portion.

Step 5: Place the plexiglas with corks down over the boot joint of the bassoon (see Photo 1). The corks should rest on the wood of the instrument between the Bb-key guard and the G-key guard. When the boot joint is laid with the U-tube cap to the right and the large bore of the instrument on the top, the lower edge of the plexiglas should visually line up parallel with the G key rod, but of course not touch it. Now place the flat portion of the hook between the



**Photo 1: Bassoon guard mounted on instrument.**

corks. Hook the curved end into the G key guard. When you are content with the position of the hook, mark the holes. Drill the holes in the plexiglas. Fasten the hook to the plexiglas with a piece of wire. Insert the wire ends from the non-cork side. Cut the ends to the desired length and bend down flat on the cork side. Glue felt over the wire ends. Also, you may wish to put felt over the curved end of the hook.

Step 6: Test the height of the cork rectangles. With the hook engaged, the corks should rest on the wood of the instrument and the plexiglas should touch the Bb-key guard. The whole assembly should have a solid feel. If more or less cork is needed, adjust at this point.

Step 7: With the hook engaged in the G-key guard, mark the Bb-key guard hole on the plexiglas. Glue the button on the cork side of the plexiglas.

Step 8: Shave the round cork to the contour of the upper portion of the Bb-key guard. You may wish to shave the cork in such a manner that the cork touches the wood of the instrument as well as the plexiglas when the plexiglas guard is in position. This is not necessary, though; my cork is only 1/4" high. Glue a strip of leather to the rounded portion of the cork which will make contact with the guard. This leather strip is important; without it the guard will bite into the cork.

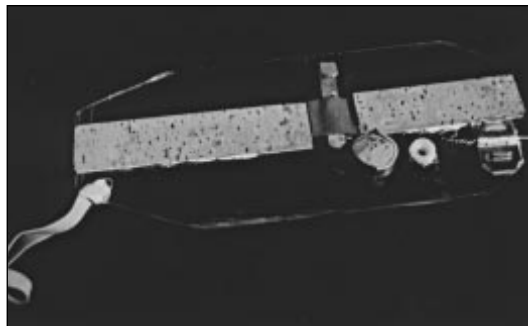
Step 9: Now position the plexiglas guard and mark the placement of the cork. Glue the cork on the cork side of the plexiglas guard.

Step 10: Position the hinge on the plexiglas guard, flat side down. You may need to cut away some of the lower rectangle's cork to fit the entire hinge on the guard. Make sure the hinge is at least 1/4" away from the Bb-key guard to allow for clearance of the wire loop. My hinge is positioned 5/8" away from the button. Now cut an approximately 3" length of the 18 gauge wire and bend one end into a small loop (see Figure 1 and Photo 2). Insert the straight end of the wire into the hinge. Engage the guard on the bassoon. Test if the wire loop will fit under the Bb-

key guard when the hinge is placed on the plexiglas. This loop of wire keeps the plexiglas from coming off the Bb-key guard. If the height is not appropriate, use the hinge as a pattern to cut a piece from 1/16" sheet of cork. Place the hinge on top of the cork and retest for clearance. Cut other sheets to raise the height of the hinge if necessary. Mark the position of the hinge and hinge holes.

Step 11: When you are happy with the placement and height of the hinge, remove the wire from the hinge. Feed the spring through the straight end of the wire. Now feed the straight end of the wire back through the hinge. Bend the straight end of the wire into a loop or handle (see Figure 1 and Photo 2).

Step 12: Drill the holes for the hinge in the plexiglas. If necessary, glue the hinge-shaped corks to the plexiglas on the cork side. Cut two 1" lengths of 18 gauge wire. Place the hinge on the cork(s), flat side down with the spring end facing the round cork, and feed the wire ends through the non-cork side of the



**Photo 2: Bassoon Guard.**

plexiglas. Clip the wires if necessary and then bend the wires down (See photo 2).

Step 13: Attach the rubber band to the hole drilled in Step 1 and hook to the rubber band. The hook goes into the neck strap eye on the boot joint. On the author's bassoon no hook is used, instead the rubber band is anchored onto a custom-made bassoon hanger shown in Photo 1. ♦

#### **About the Author:**

*Dr. Terry B. Ewell is assistant professor of bassoon and music theory at West Virginia University. Currently he is principal bassoon of the Wheeling Symphony Orchestra and acting principal bassoon of the West Virginia Symphony Orchestra. He has published articles in the NACWPI Journal, The Double Reed, and the International Double Reed Journal, and has recorded for Musical Heritage Society, Hong Kong Records, and Pickwick Records. In 1981 Prof. Ewell won first prize in the International Fernand Gillet Competition held in Lubbock, Texas.*