Key Holder Assembly Designs

Introduction

This document describes how to design the assembly. It shows prototypes that I have build and discusses options.

Details of Final Design

Figure 1 below is a photograph of the keyholder that is featured in this Instructable. Figure 2 is a drawing of the edge view.

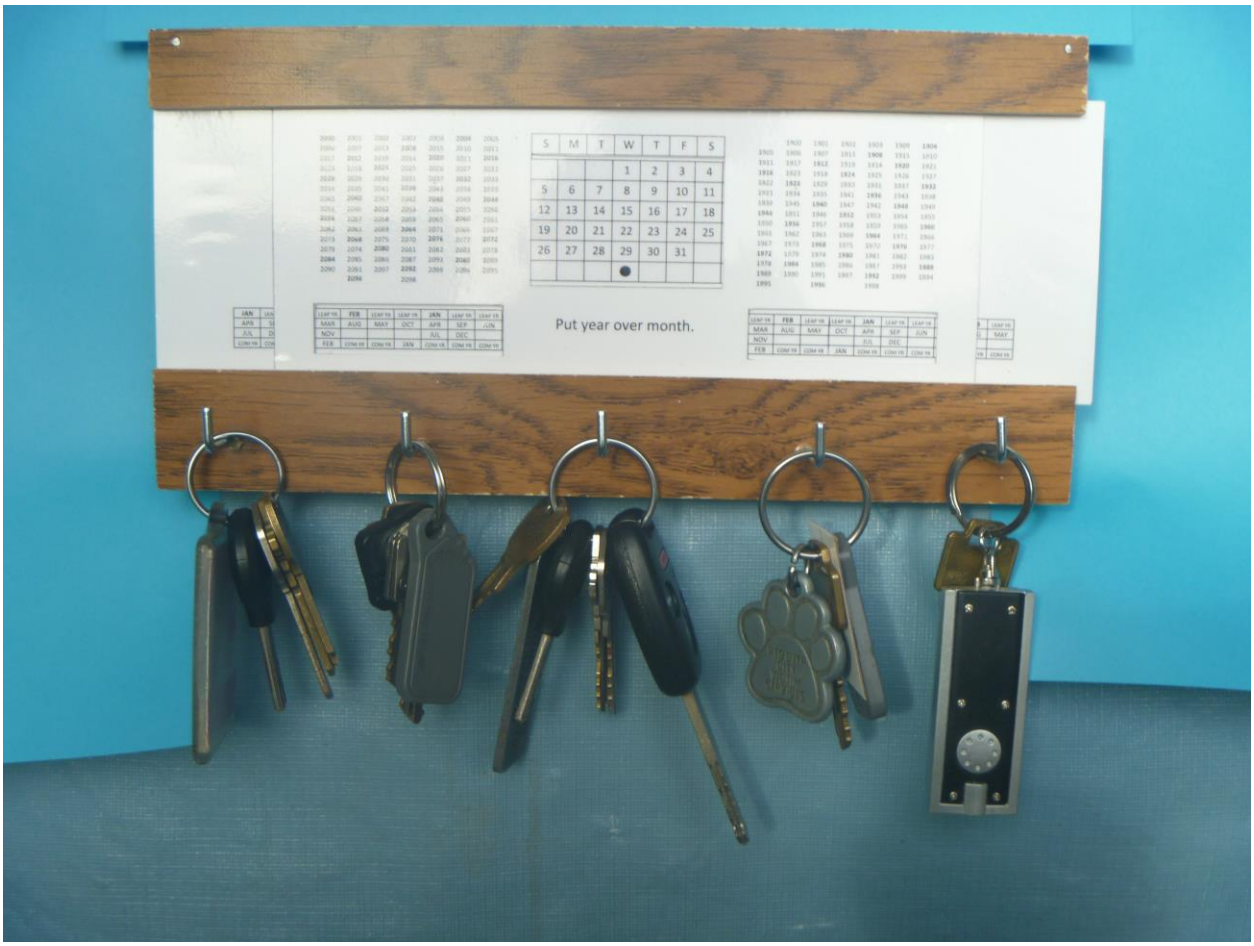

Figure 1: Assembled key holder with keys hanging on it.

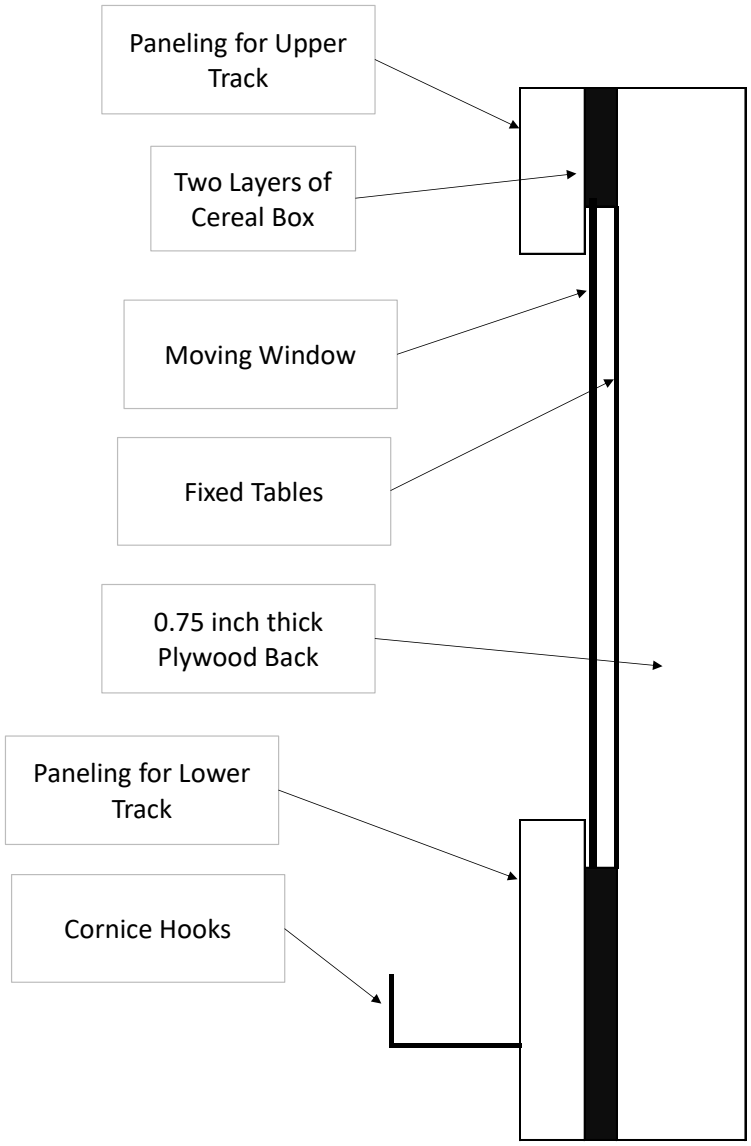

Figure 2: Edge view of the featured keyholder

The design of this keyholder was influenced by the materials that I had available. To avoid using frame hooks, I wanted a piece of 0.75-inch-thick plywood that was 5.5 inches wide instead of 4.75 inches wide. This would have provided space for drilling two holes above the calendar for hanging on a wall.

The First Prototype

Figure 3 below is a photograph of the first protype and Figure 4 is a drawing of the edge view.

Figure 3: First protype

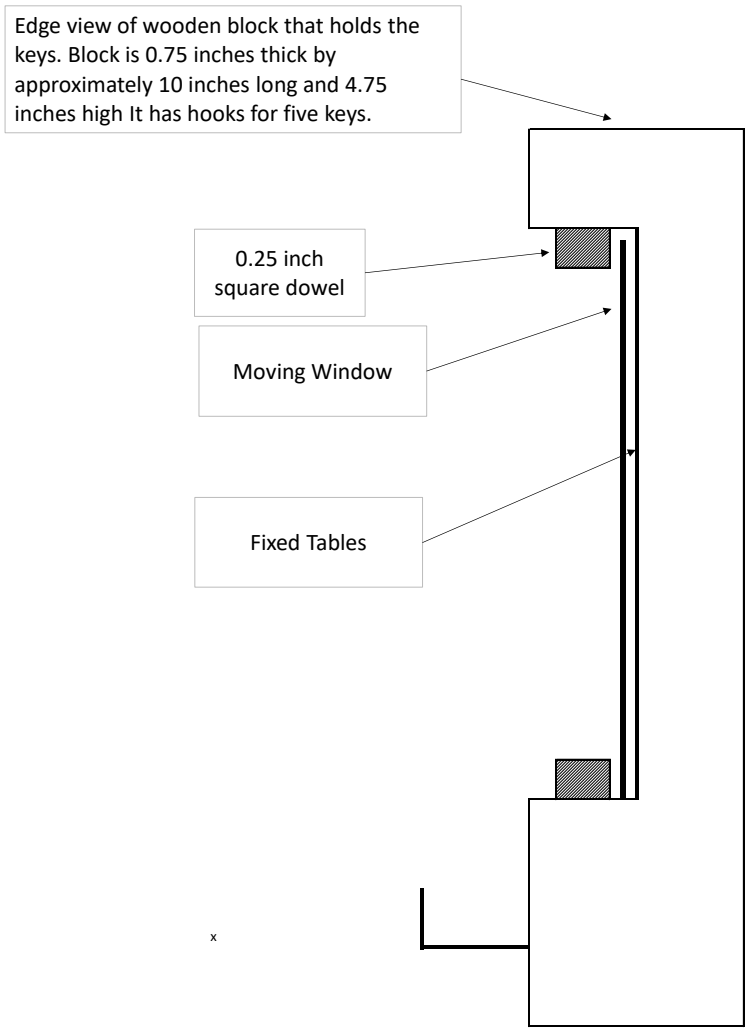

Figure 4: Edge view of fist prototype

For the first protype, I cut a 0.375-inch-deep channel in a 0.75-inch-thick piece of plywood. The channel is for the calendar and is deeper than needed for a 0.25-inch square dowel and two sheets of cardstock covered with laminate. Originally, I was planning to have the window fixed in place and the tables that are on the fixed piece move as a slider behind the window. The slider would have been thicker than a sheet of laminate.

To cut out the channel, I made a series of cuts 0.125 inches apart with a table saw. The remaining material was removed with a wood chisel and a rasp. This was time consuming and the finished channel had some gouges on the bottom. Since the fixed tables cover the bottom, the gouges did not matter.

Gluing the 0.25-inch square dowels in place to have a track for the window that was neither too wide or too narrow was difficult. The dowels spoiled the appearance.

Conceptual Design of a Keyholder with a Moving Slider Calendar

Figure 5 below is a drawing of the face and Figure 6 is a drawing of the edge view.

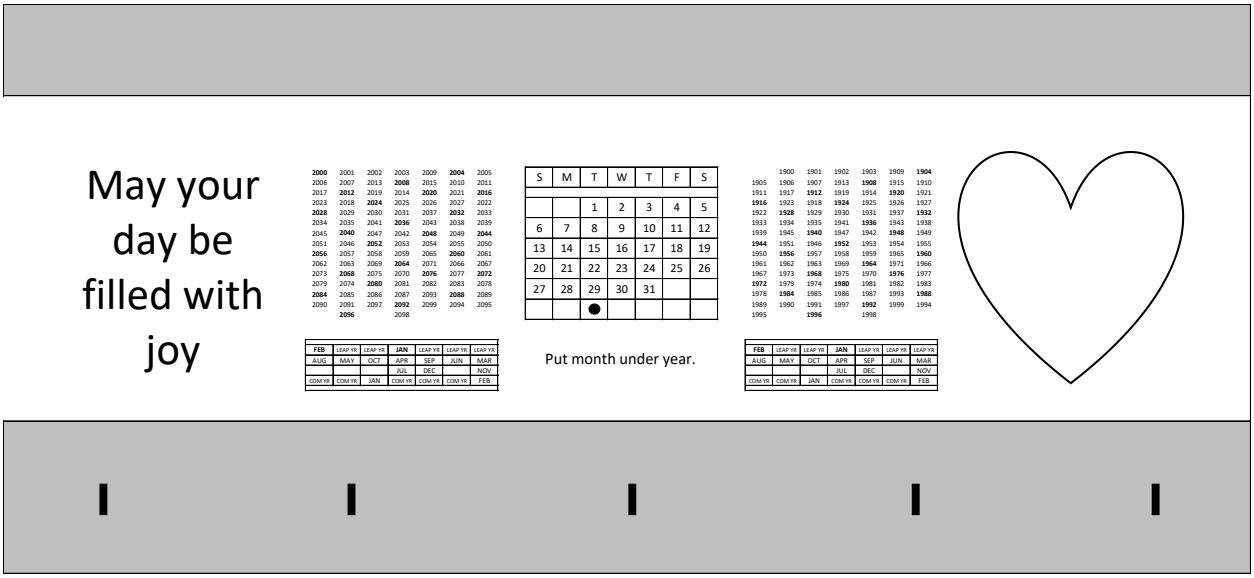

Figure 5: Face of keyholder with a moving slider calendar

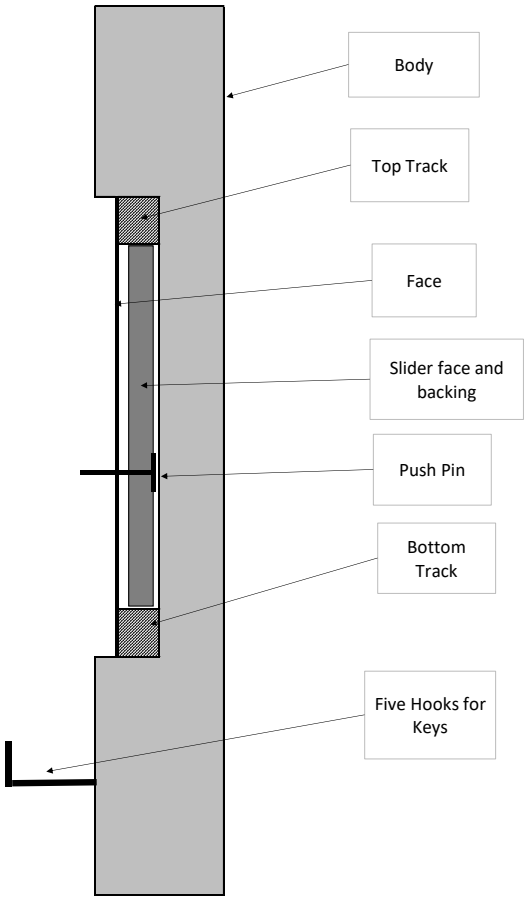

Figure 6: Edge view of keyholder with a moving slider calendar

The appearance of a keyholder with a moving slider calendar is more pleasing than one with a moving window due to parts of tables that are not in use being hidden. A disadvantage is that the printing has to be smaller to fit a fixed length. In the case of my 10-inch-wide keyholder, the printing for a moving slider calendar is 80% of the size for a moving window calendar. However, the printing is still quite readable. Figure 5 has “May your day be filled with joy” beside the left year table and a heart beside the right year table. For a different appearance, these areas and the areas above and below the calendar could be covered with paneling or thin plywood.

Using 0.25-inch-thick Plywood to Make a Keyholder

Layers of 0.25-inch-thick plywood can be substituted for the 0.75-inch-thick plywood and 0.125-inch-thick paneling that I used in the keyholder that is featured in this Instructable. The face would look almost the same as the keyboard in Figure 1. Figure 7 is a drawing of the edge view.

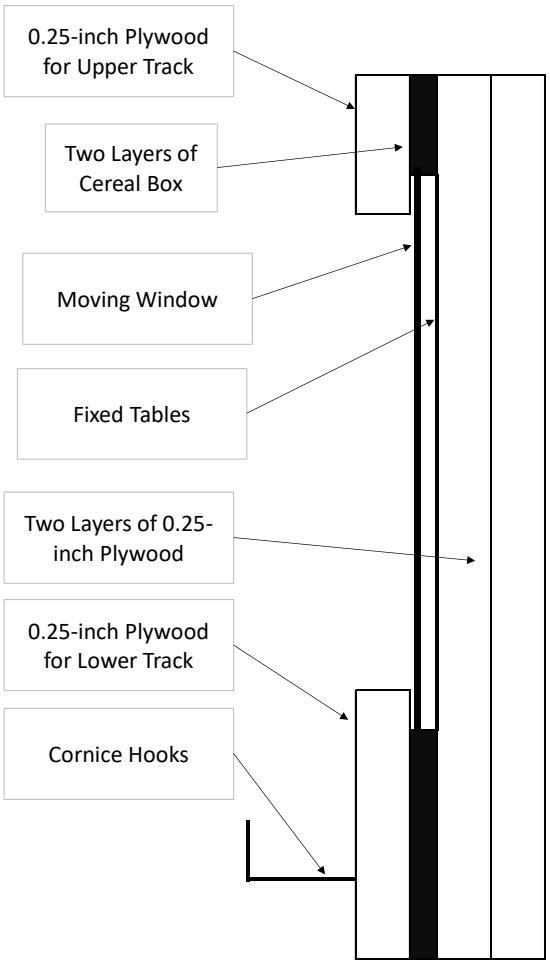

Figure 7: Edge view of keyholder made from 0.25-inch-thick plywood

An advantage to using 0.25-inch-thick plywood is that the same material is used for the back as for the tracks. Instead of using two layers of cereal box for spacers, grooves can be cut in the plywood for the upper and lower tracks. The grooves have to be shallow for only two layers of cardstock. Obtaining a sharp edge for the lower track may be difficult.

An Easy to Build Keyholder

The designs described above require cutting three or more pieces of wood or paneling. A keyholder with a moving window calendar can be made from a single rectangular piece of 0.75-inch-thick material if cardstock is used for the faces of the tracks. Figure 8 is a photo of the face and Figure 9 is a drawing of the edge view.

Figure 8: Face of simple to build keyholder

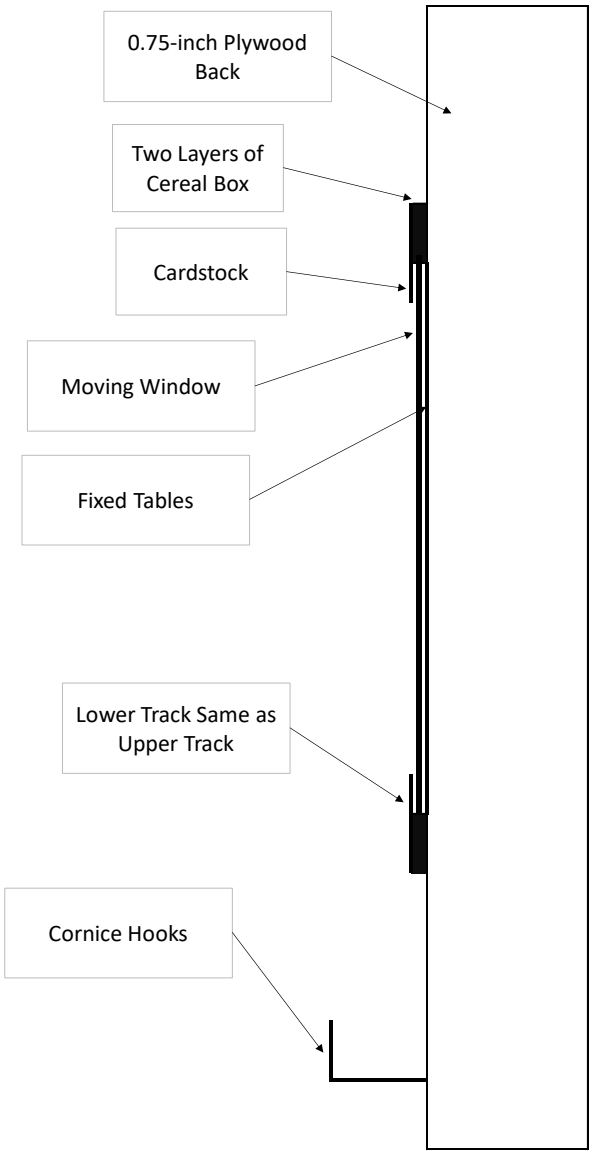

Figure 9: Edge view of simple to build keyholder

The faces of the tracks are made from cardstock covered with laminate instead of paneling or plywood. As can be seen in the photo, I did not print anything on the faces. To improve the appearance, a black and white or coloured design can be printed on their faces. For the back, I used an old maple breadboard and cut out a piece 6.5 inches high by 9.25 inches wide. It was high enough to enable putting the lower track above the cornice hooks. The height can be reduced so that the cornice hooks go through the lower track as they do in Figure 1.

Materials

Special materials are required for the back, the faces of the tracks and the hooks for the keys. The following are some suggestions if you have difficulty finding suitable materials.

For the back a piece of wood that is 0.75 inches thick is required. Some possibilities are:

- Purchase a piece of wood shelving and cut it to size. Shelving of various sizes made from various types of wood cost from ten to twenty dollars for a piece that is much larger than what is needed.
- Purchase a two-foot by two-foot or a two-foot by four-foot sheet of 0.25-inch plywood and glue three layers together. Sheets this size are often available at a cost of ten to twenty dollars.
- A scrap piece of 0.75-inch-thick plywood or mdf (medium density fiberboard)
- Glue together two boards that are narrower than the width wanted. Applying glue to the edges and butting them together may produce a fairly strong joint. However, to be sure that the pieces do not come apart a piece of thin plywood or hardboard should be glued or nailed to the back side.
- Use cedar planks that are sold for grilling salmon. One common size is around five inches high by eleven inches long by 0.3 inches thick. Another common size is the same dimensions but 0.75 inches thick. If two layers are required for thickness and a width greater than the width of the planks is wanted, the grains should be in opposite directions. Cedar planks may cost as much as shelving or a small sheet of plywood, so they may not be a desirable option.

For the faces of the tracks, material that is 0.125 to 0.25 inches thick is desirable. Some possibilities are:

- 0.25-inch-thick plywood. The design shown in Figure 7 is attractive because it uses the same material for the faces as for the back.
- Hardboard, which is may be available in small sheets at a dollar store or an arts and craft store.
- Small pieces of plywood, which may also be available at a these stores.
- A piece of vinyl laminate flooring.
- Cardstock, as described above.

Some options for hooks for hanging the keys are:

- Cornice hooks like I used. They are also called screw hooks and are available in various sizes from hardware stores.
- Cup hooks.
- Screws or nails.
- Self-stick hooks.
- Round dowels 0.25-inch in diameter with a notch in the end.
- Various hooks that can be found by doing a search for “hooks” on a hardware store or craft store website, or for “key hooks” on Amazon or Temu.

Some hooks require more height for mounting than a simple cornice hook or a cup hook. Therefore, the first step in designing a keyholder is to choose the type of hook.