

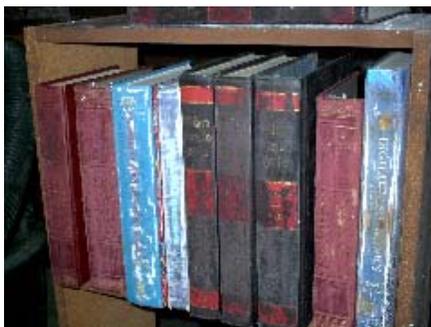
<http://www.geocities.com/mudflap68/>

The haunted bookshelf is an illusion where books seemingly slide in and out of a bookshelf at random. Please feel free to comment, question, or otherwise. All images are linked to larger pictures.

I have wanted to make this effect for years but I never liked the other designs that I had seen on the Internet with little arms and rubber bands making the books move in and out. It seemed like a lot of maintenance but I couldn't think of a good way to make a cam drive. One day out of the blue it dawned on me that a piece of PVC might do the trick. So I set out to create what I believe is the first cam drive haunted bookshelf.



I have spent zero money on this. I am somewhat of a pack rat so everything was just laying around. I had an old bookshelf residing in the garage. It was destined for the trash as we were unable to sell it in the last garage sale. So I didn't even bother to ask the wife if it was OK to hack it. With that settled, I set out to acquire books to hack as well. Our whole family are avid readers but we like our books and are not ready to part with them.



I'm a member of Freecycle in our town so I posted a request for old books and/or encyclopedias. The response was instantaneous. I was given two old sets of encyclopedias and a few random books but they looked like they had never been used. I fixed that by sanding the spines and covers with coarse sandpaper, beating on them with a hammer, gouging them with screw drivers, and burning with a blow torch. It worked great!

I selected four books at random to be "haunted". I measured the thickness of the book contents and cut wood blocks to match. I cut the pages out with a circular saw, down to the spines and then mounted the wood block in the book with wood screws. I then screwed an eye screw in the end to connect to a push rod.



I wanted to test my idea by animating one book first so I started out by cutting almost all the way through a piece of PVC with my miter saw but stopped with about an inch left attached. I then used a piece of coat hanger to manufacture a push rod and soldered it so it wouldn't catch as the cam pivoted.



I've had some trouble trying to figure out how to make it rotate. For now, I'm using water bottle tops (they fit and after drilling out the center, they rotate). I drilled holes through the bookshelf sides and mounted bolts to mount the cam and bottle tops. I also cut a section through the shelf itself as I want to mount a motor underneath rather than off to one side. I used an old upright vacuum cleaner belt and just used my cordless drill to provide power for the test. It's alive!!!



I positioned the remaining "haunted" books in amongst books that still had their contents and then marked on the PVC where I intended to make my remaining cuts. I rotated the PVC between cuts to create the cam so the books will move in and out at different intervals.



I manufactured push rods to match the others, attached them to the PVC and soldered them. I then attached them to the eye screws on the books and mounted the whole works back in the bookshelf. I had an old blender motor that I was able to mount underneath and attach the belt to.

I have included two clips. One to show the effect and another to show the workings behind.



I'm not satisfied with the performance of the water bottle tops. They are too fragile and cause too much drag on the motor. My plan is to try skateboard wheels instead. I'll update this page as I go.



Obtained from  
Omarshauntedtrail.com