

# Homemade Table Saw Fence Mechanism

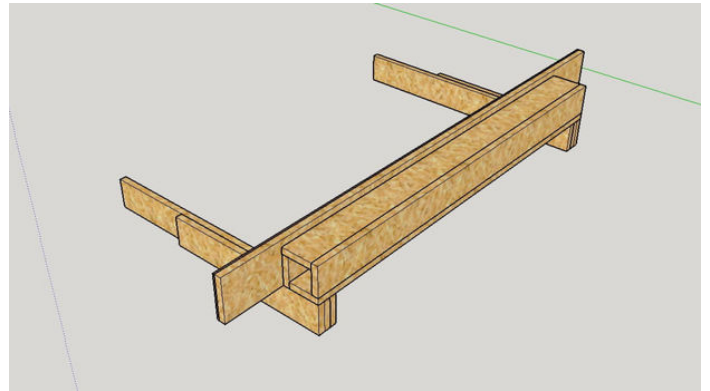
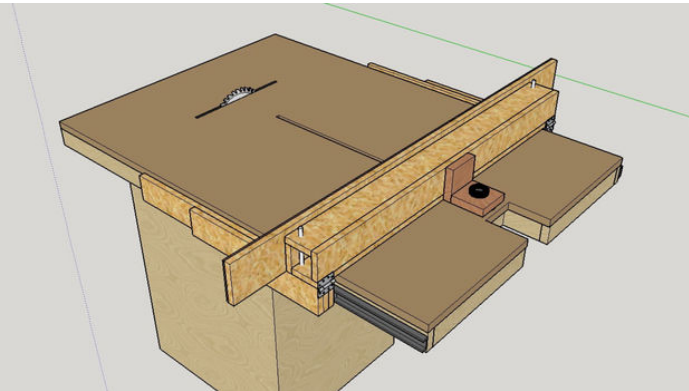
## Intro: Homemade Table Saw Fence Mechanism

How I built an easy, quick and simple homemade table saw fence mechanism, made of MDF, OSB, Pinewood, Plywood and a pair of ball bearing drawer slides.



### Step 1:

Firstly, I cut these pieces for the fence, which are made of OSB.



### Step 2:

Because I didn't have a single big piece of plywood, which is a really good wood for many uses & constructions, I made this project from woods I found in my workshop like (MDF, OSB, Pinewood & Plywood).



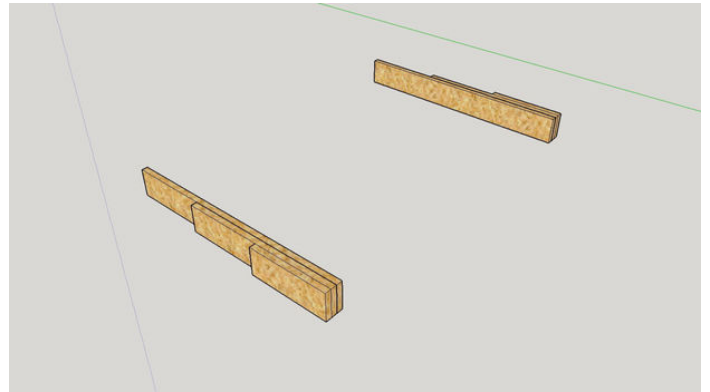
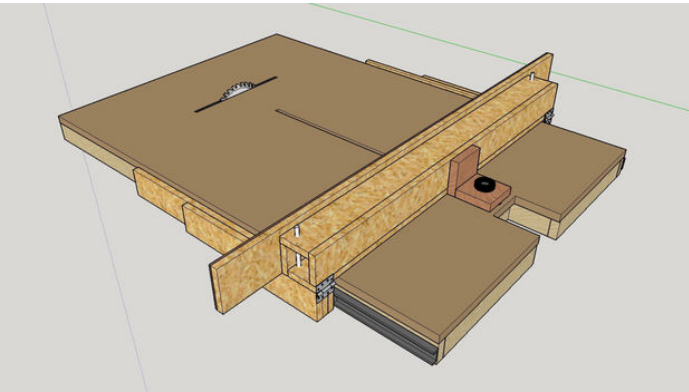
### Step 3:

Because OSB leaves splinters, I had to sand every surface of the wood really well.



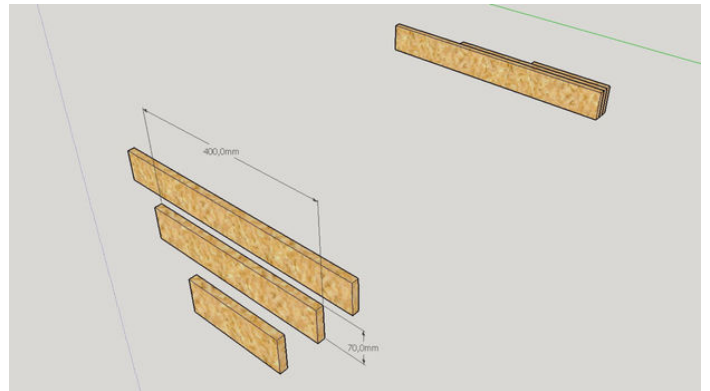
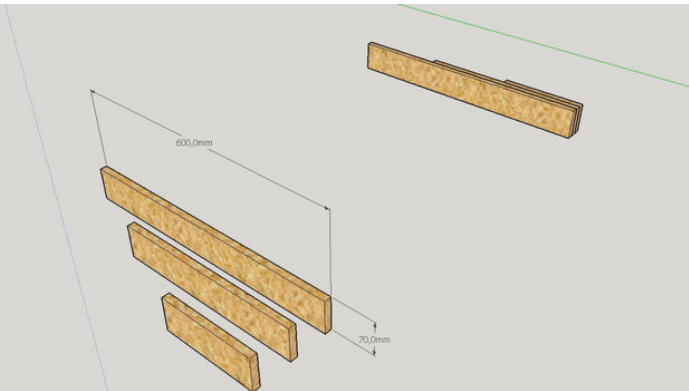
### Step 4:

I assembled these pieces of the fence in order, from the biggest, to the smallest.

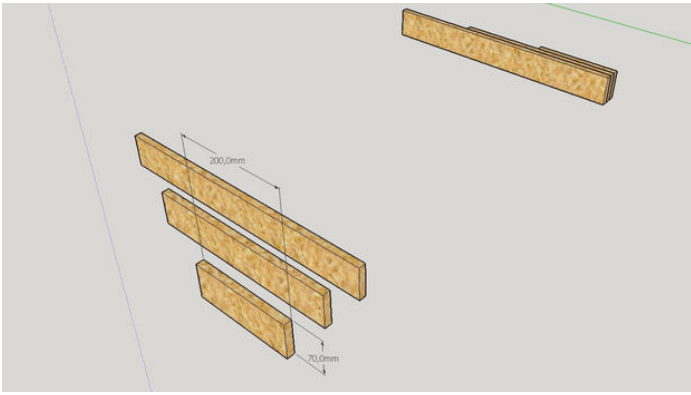


### Step 5:

The big piece is 60 by 7cm, the middle one is 40 by 7cm and the small one is 20 by 7cm.

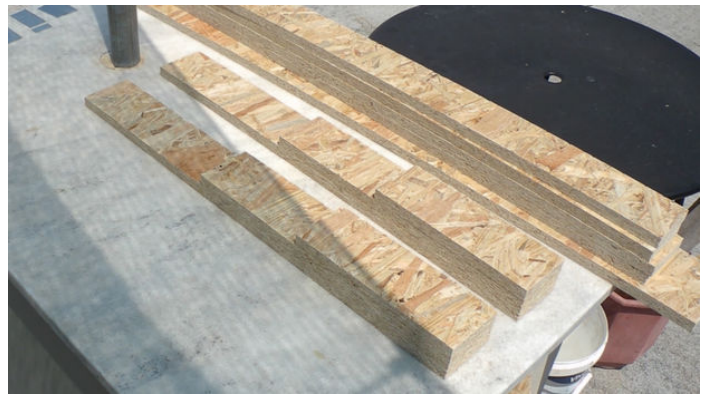
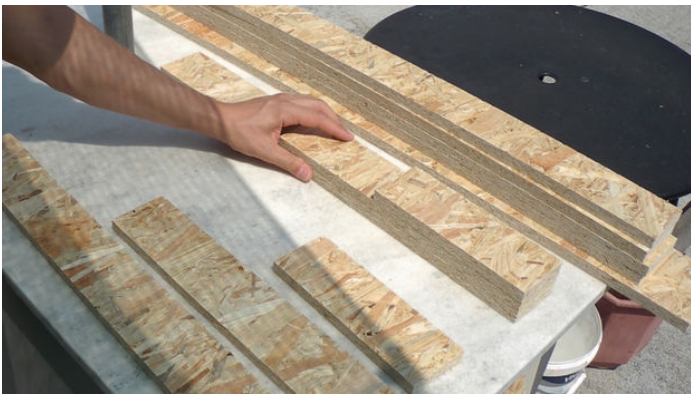






**Step 6:**

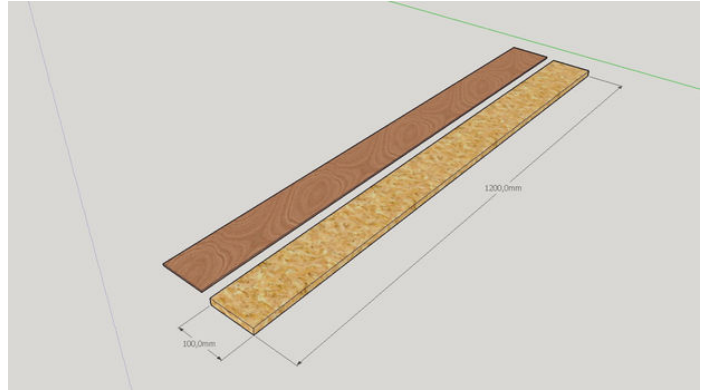
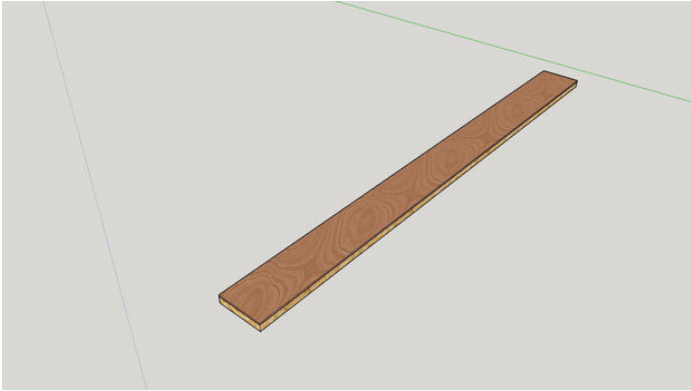
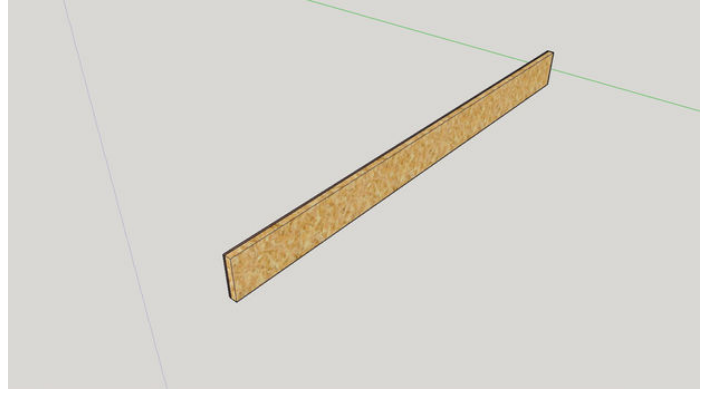
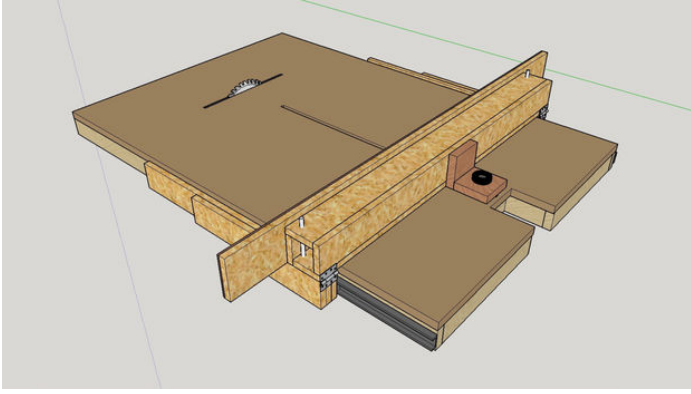
I repeated the same process for the other piece and then I rounded all the edges with the router.





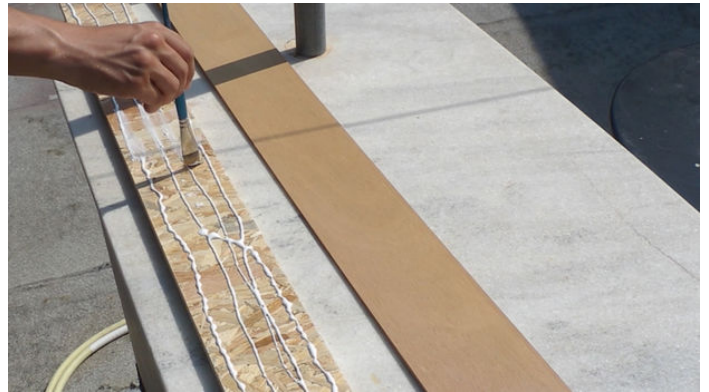
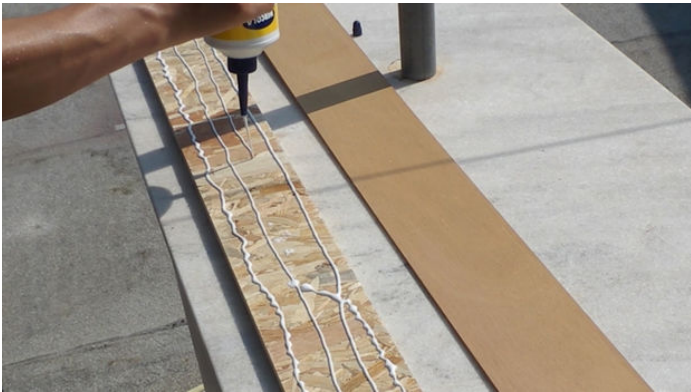
### Step 7:

Now for this part of the fence I cut a big piece of OSB, with dimensions 1,2m by 10cm.



### Step 8:

In order for the pieces of wood, that I will later cut, using the table saw, to slide smoothly on the fence, I also glued a piece of plywood 4mm thick over the 15mm OSB piece.



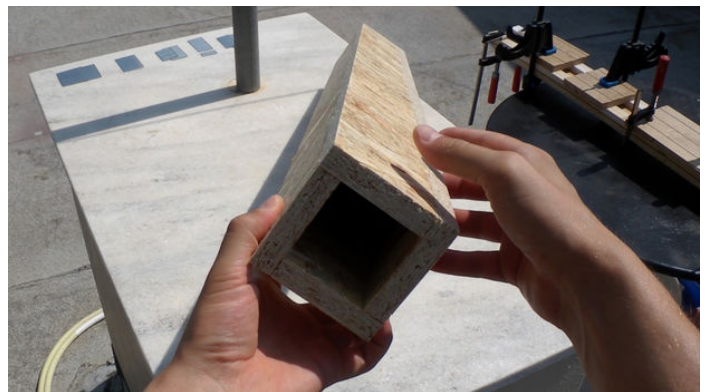
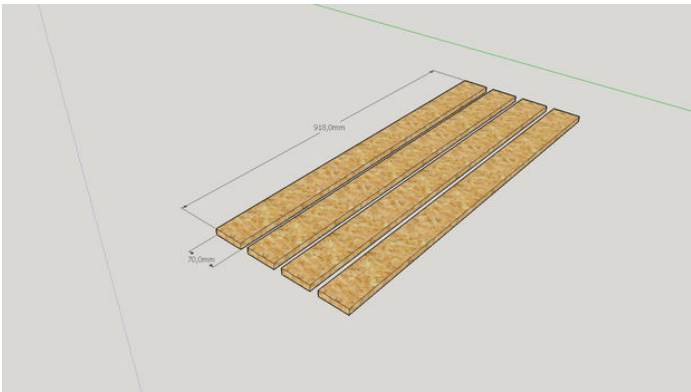
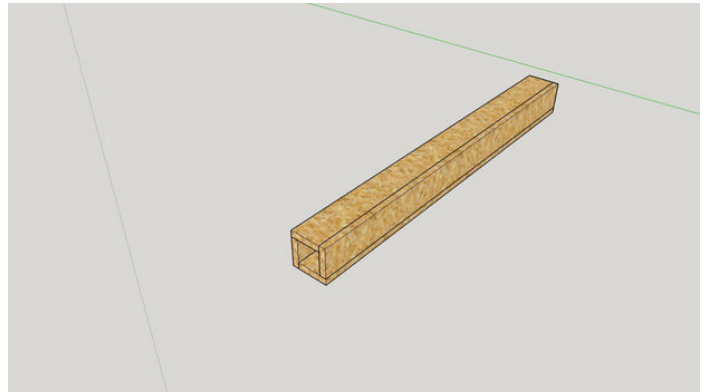
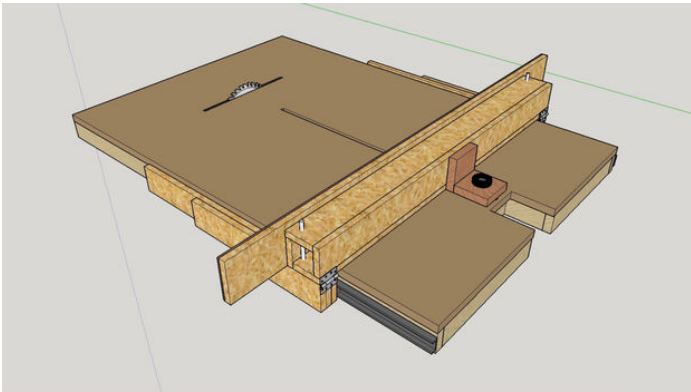
### Step 9:

I clamped them down together and let the glue do the job.



**Step 10:**

For this part of the fence, I cut 4 pieces of 91,8cm by 7cm, the length depends on the thickness of the drawer slides and the width of the surface of the cabinet I'm going to make.





### Step 11:

I used this piece of OSB to find exactly the center of the other piece of wood and then I drilled holes on all 4 sides.



### Step 12:

Then with a countersink bit I drilled all the holes again, so that the head of the screw that I will later place, can go under the top of the wood without splitting it.





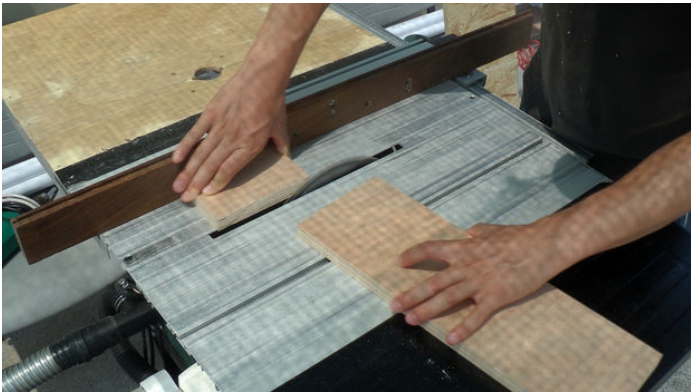
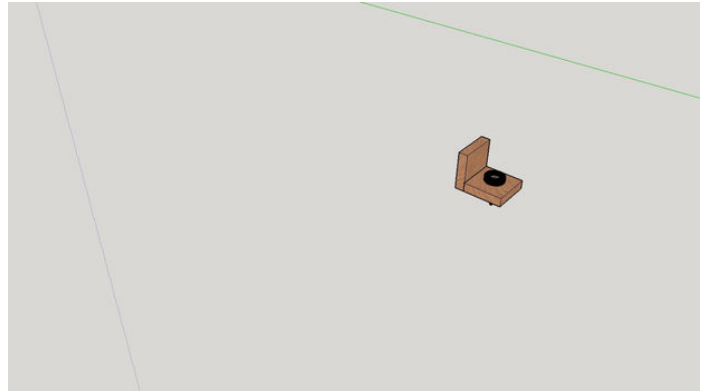
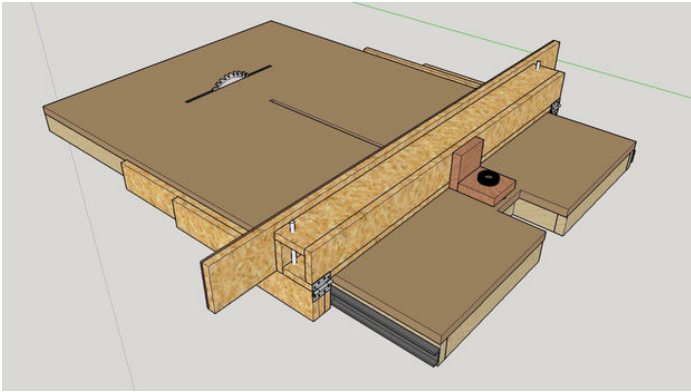
**Step 13:**

I sand it very well and rounded all the edges.



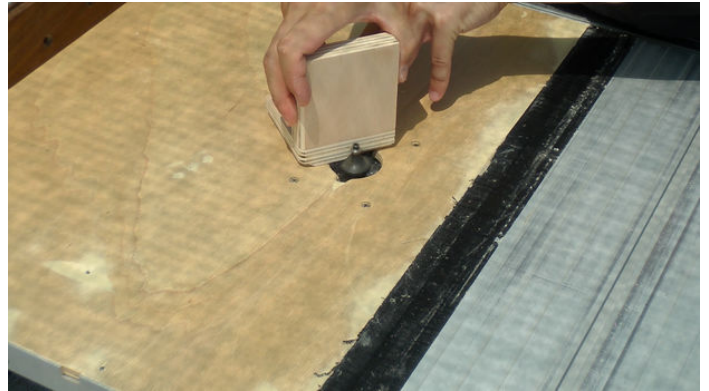
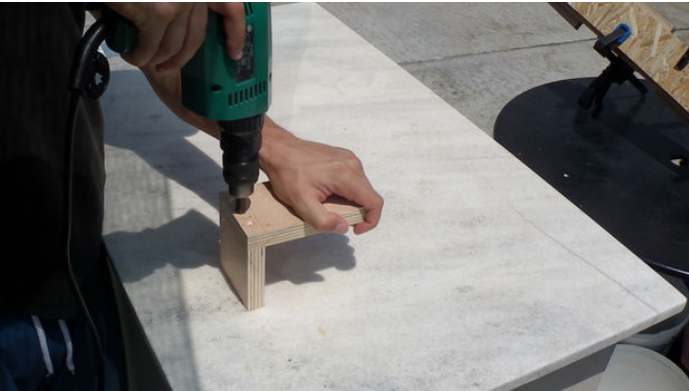
**Step 14:**

Then I cut this part of the fence which consists of two 8,5 by 8,5cm pcs of plywood.



**Step 15:**

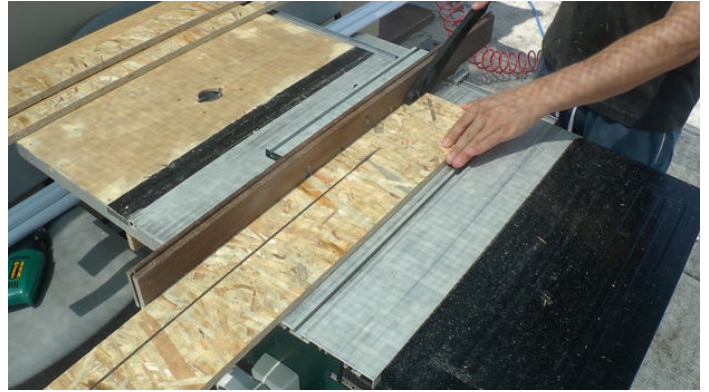
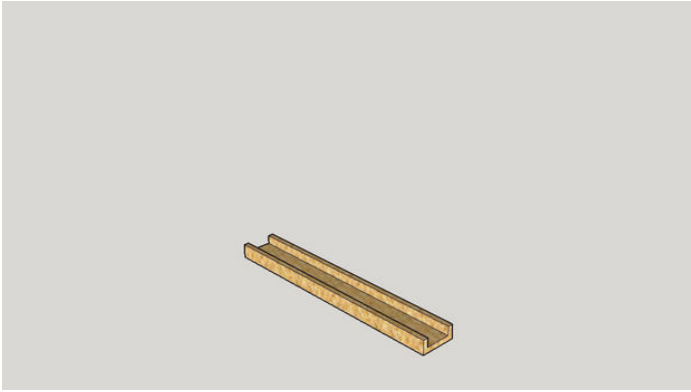
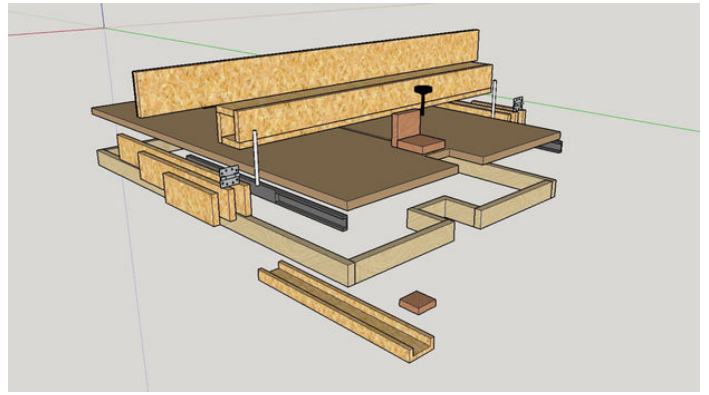
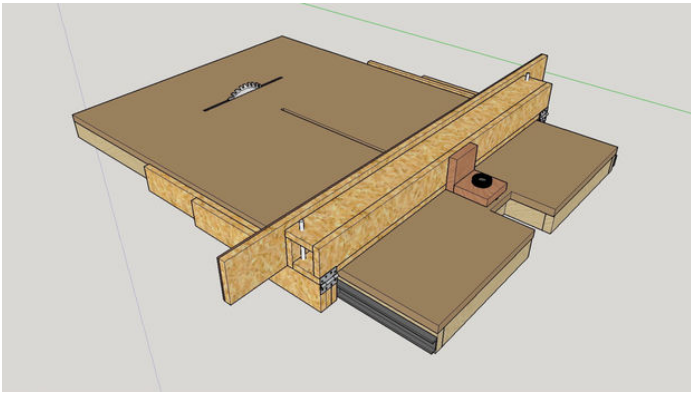
Nailed them, drilled them, countersink the holes, screwed them, sanded them and rounded all the edges.



**Step 16:**

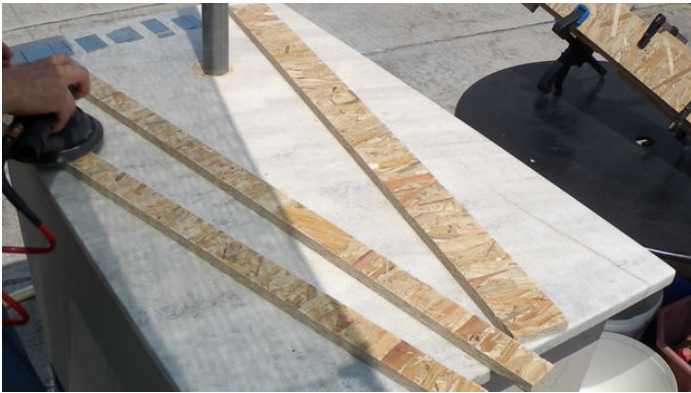
Now, under the top of the table saw there is this piece of OSB, which consists of one piece with dimensions 70 by 7,2cm and two pieces with 70 by 4cm.



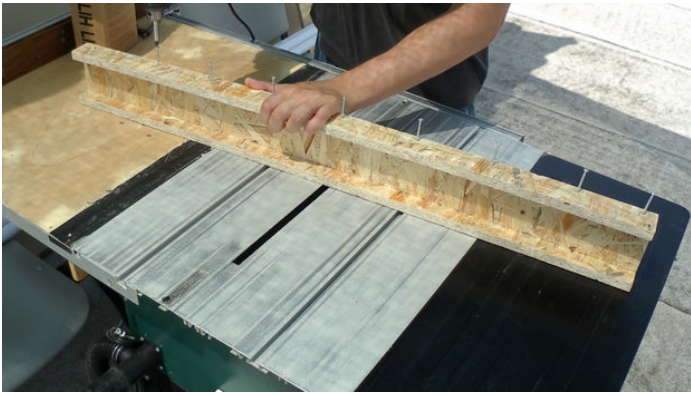
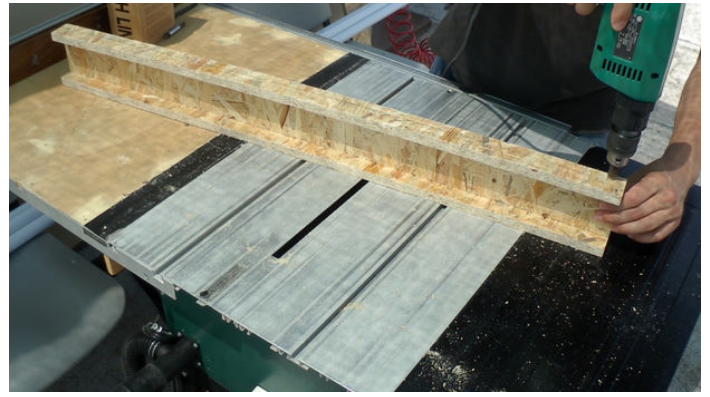
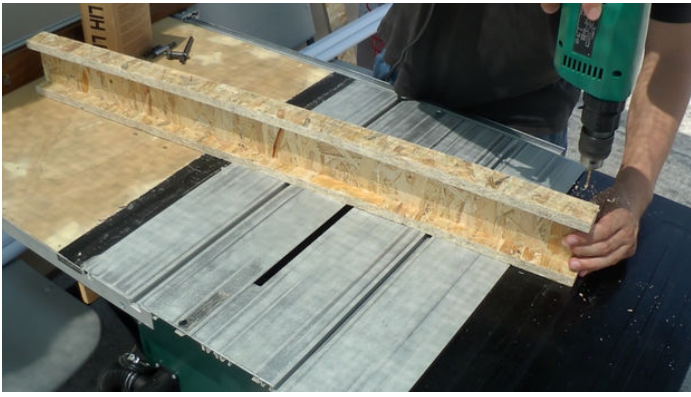


**Step 17:**

...and I repeated the same process... nailed, drilled, countersink the holes, and screwed.

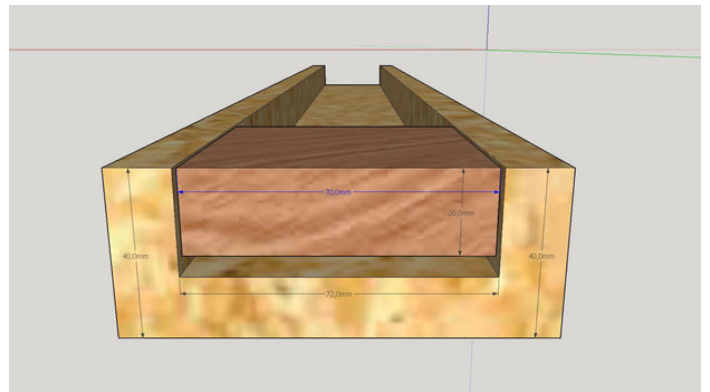
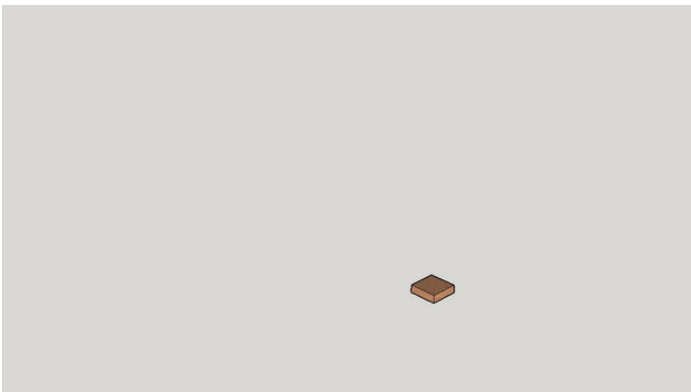
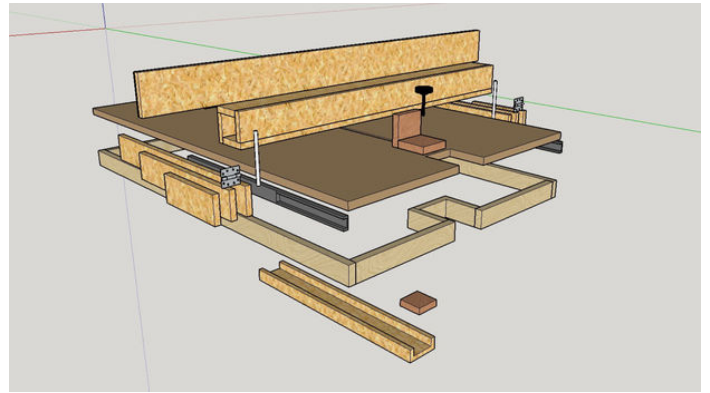
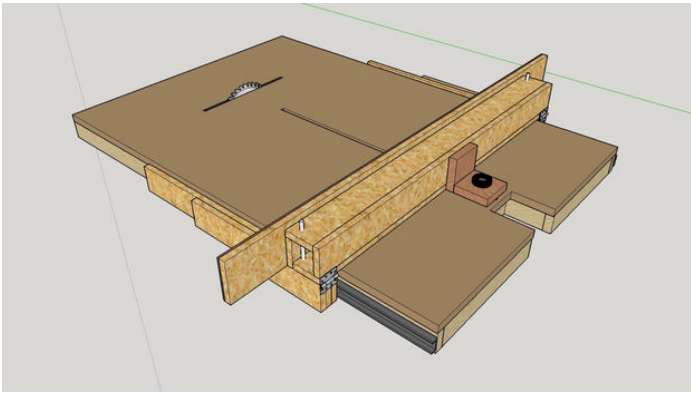






**Step 18:**

Also, under the top of the table saw there is this piece of plywood with dimensions 7 by 7cm, that is going to slide into the slot I previously built.







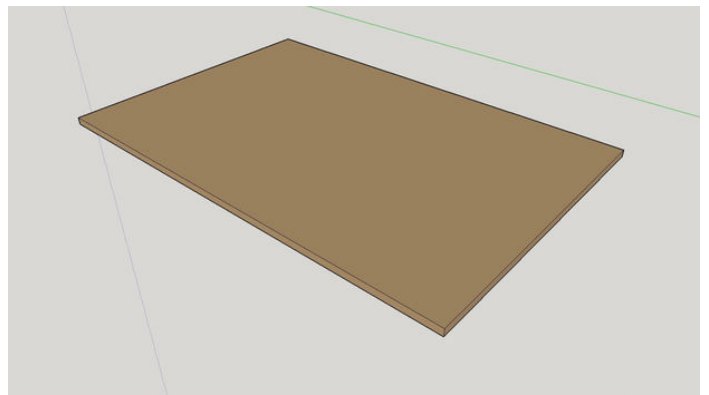
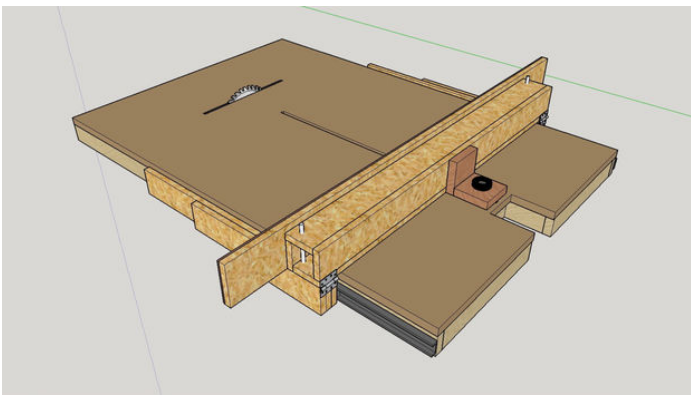
**Step 19:**

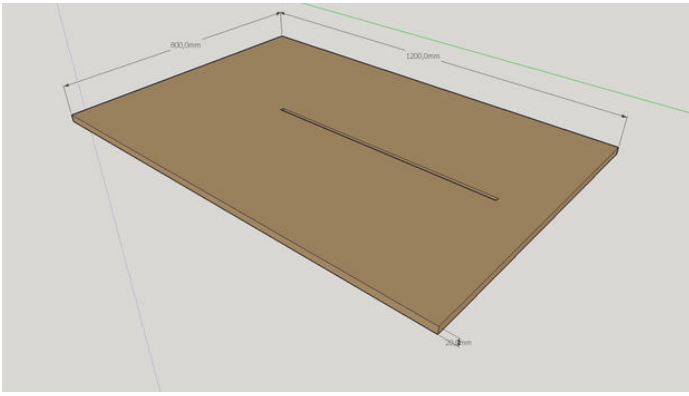
After the piece of the fence has dried, it's time to cut the extra piece of plywood.



**Step 20:**

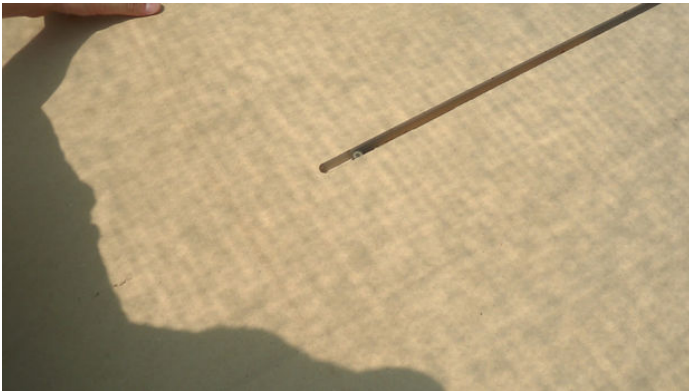
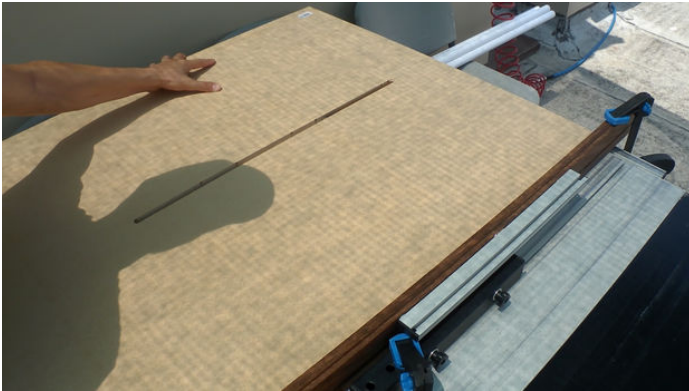
Now, for the top surface of the construction, I used MDF: 1,2m long, 80cm wide and 2cm thick.





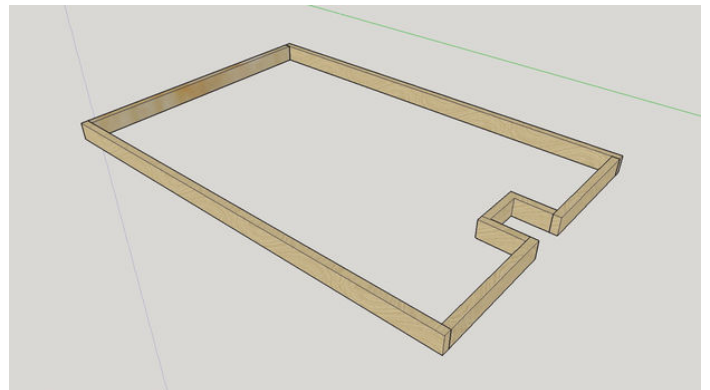
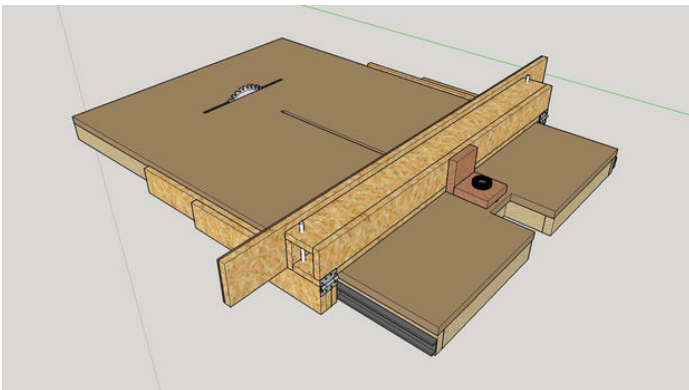
**Step 21:**

Then, I made exactly in the center, a slot using the router, in order to be able to move the fence with the bolt and tighten it at whatever length I wish.



**Step 22:**

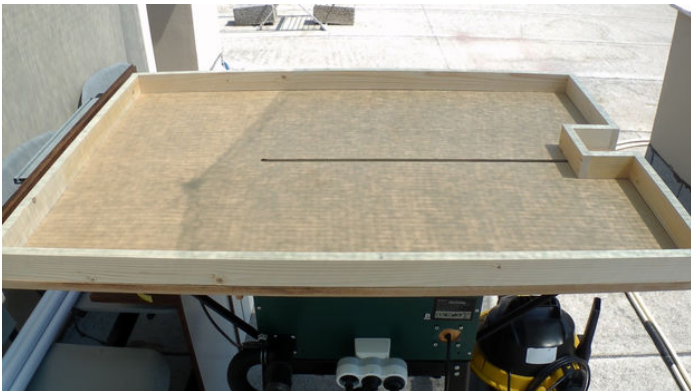
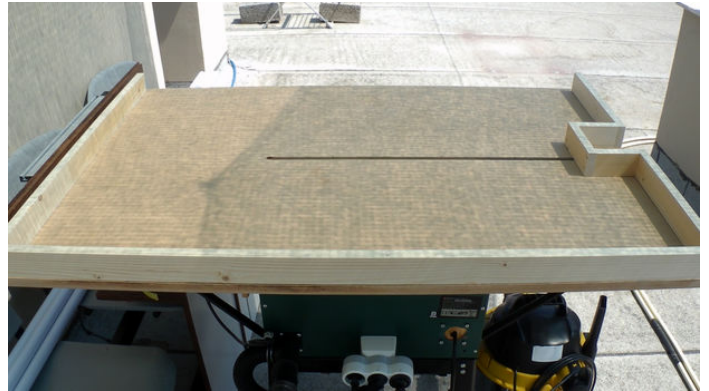
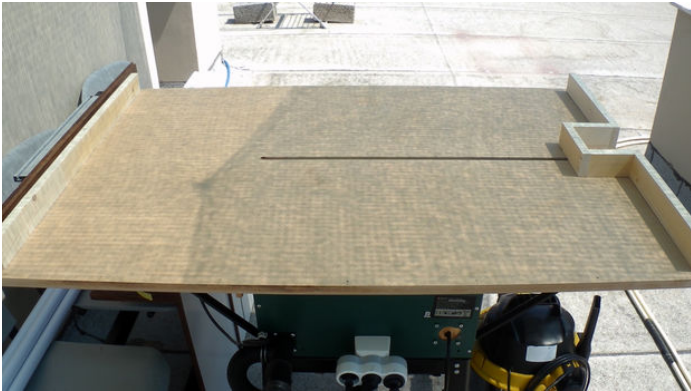
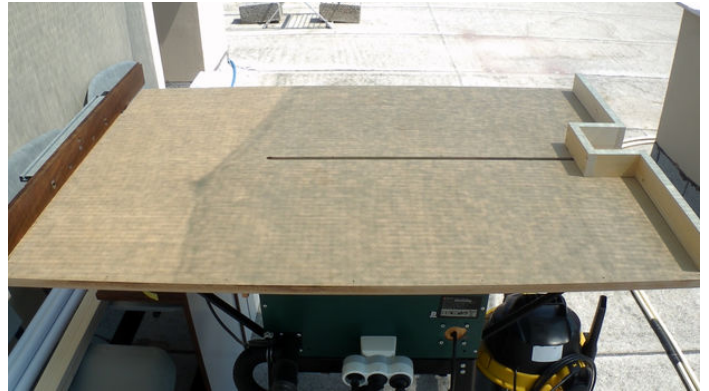
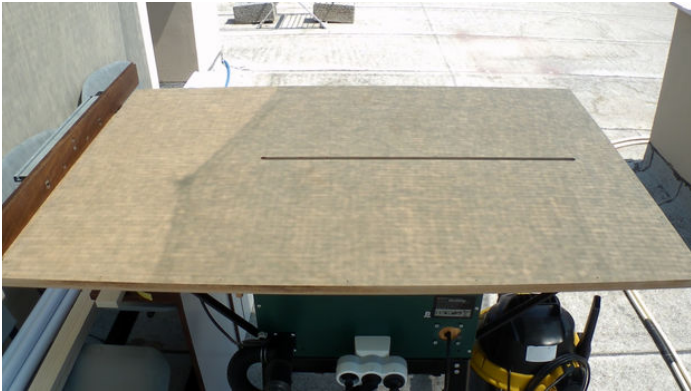
Then I cut some pieces of pinewood in order to keep the whole MDF surface straight and so that I will be able to install the drawer slides later.





**Step 23:**

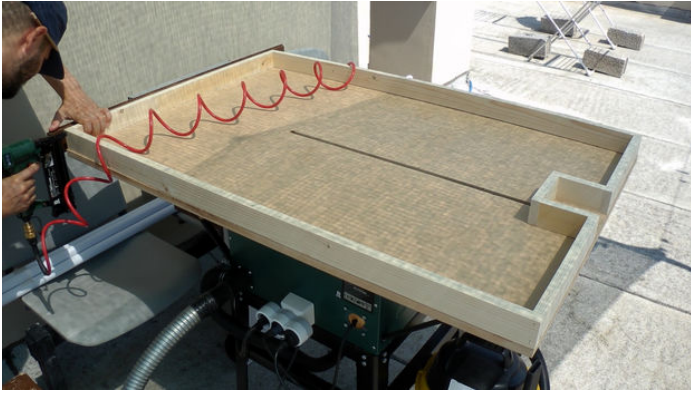
The width of these pieces are 5cm.





### Step 24:

Nailed all the pieces together and marked the framework on the MDF, in order to make the drill for the screw, exactly in the center.



### Step 25:

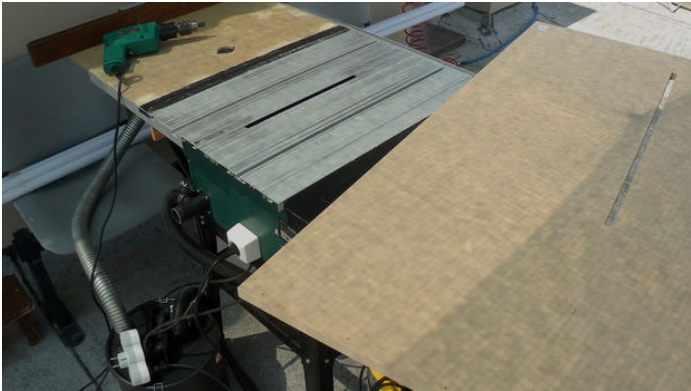
I made all the holes perimetrically, placing under the MDF this small piece of plywood, in order to avoid any damage on the other side.





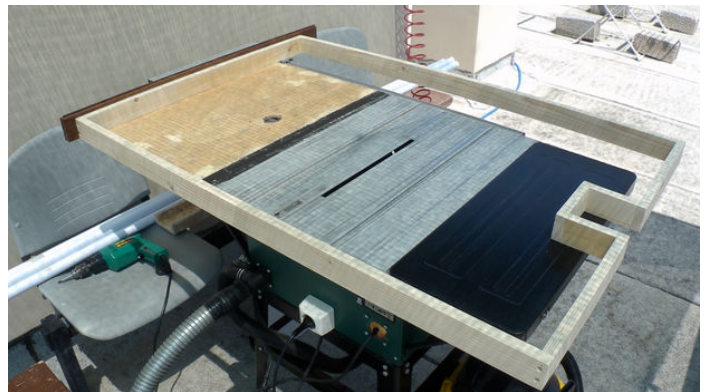
**Step 26:**

I flipped it over and with a countersink bit I drilled all the holes again, in order to keep the head of every screw under the top of the surface.

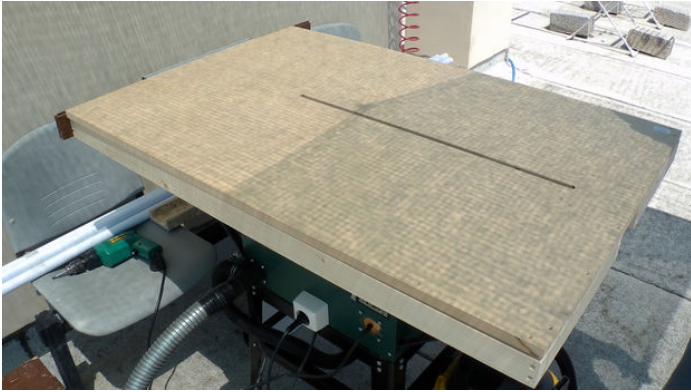


**Step 27:**

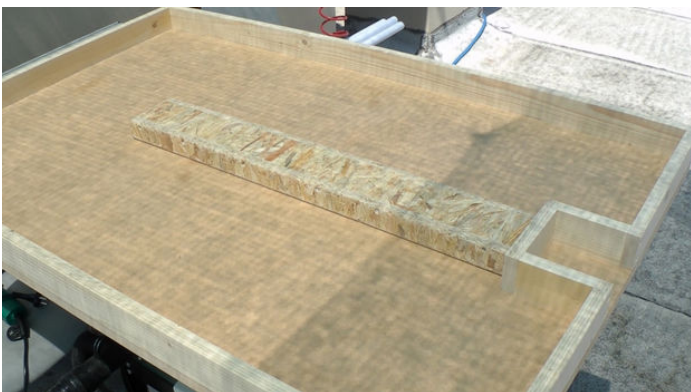
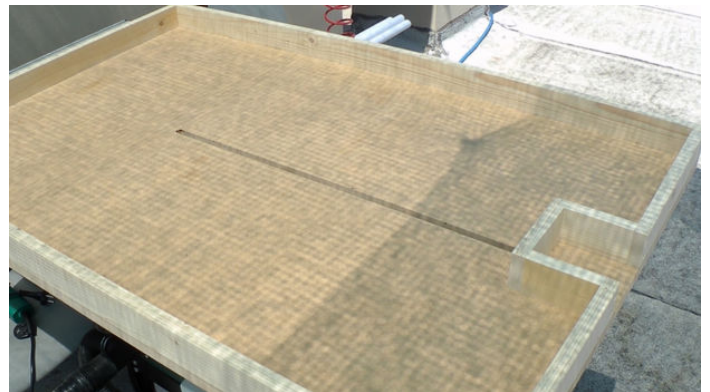
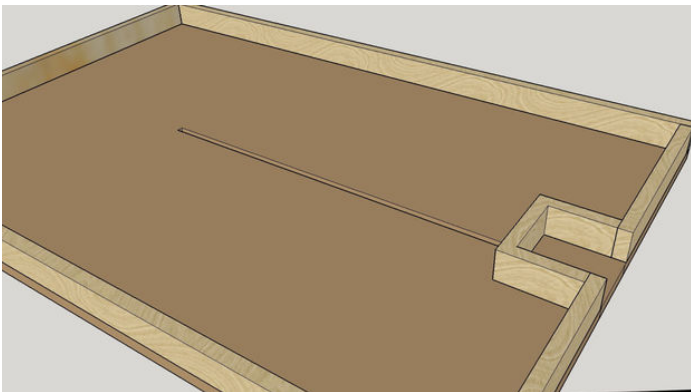
Then aligned and screwed the framework in place.







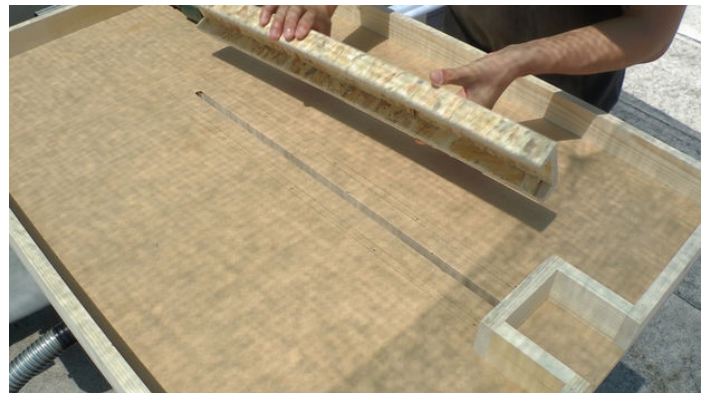
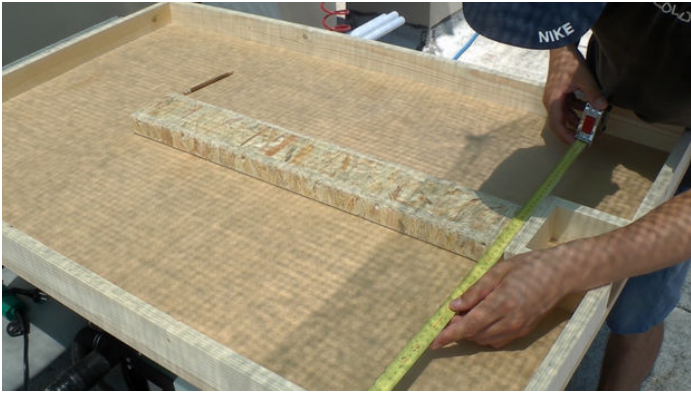
**Step 28:**  
I flipped it over again, and put the piece I made before exactly in the center.



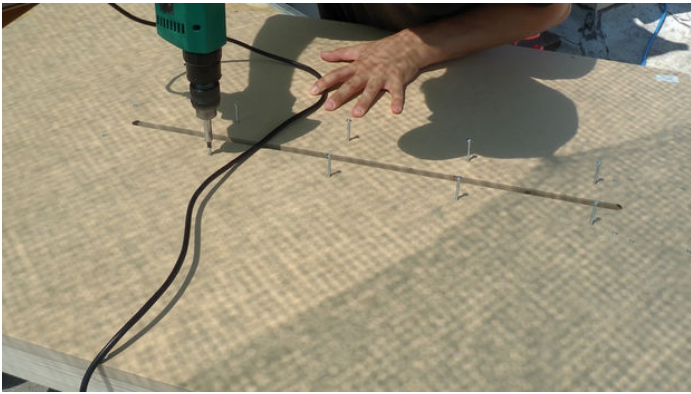


**Step 29:**

Measured it, marked it, drilled it, countersunk all the holes, put 2 nails to keep it in place and screwed it down.

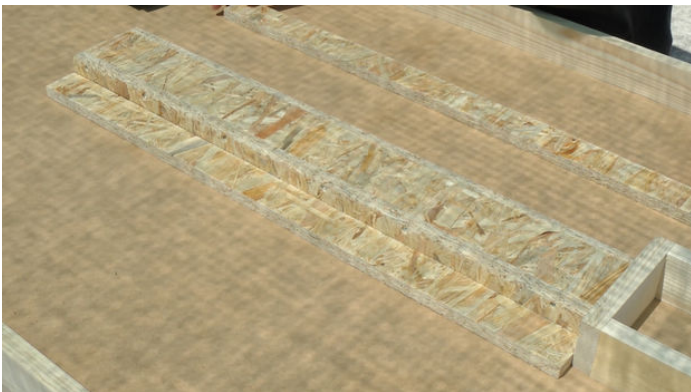






**Step 30:**

I put these two extra pieces to prevent the wood from breaking.

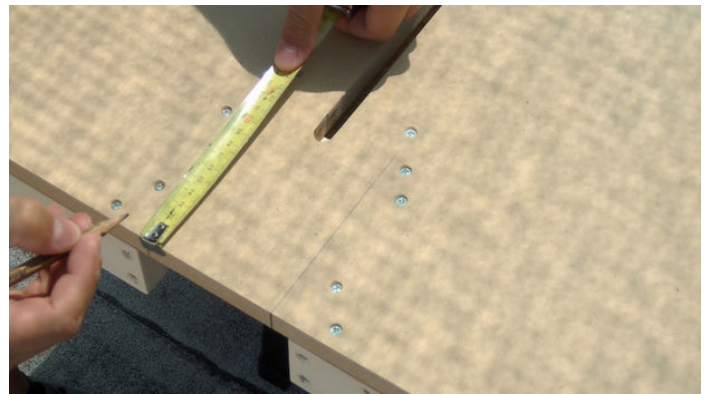
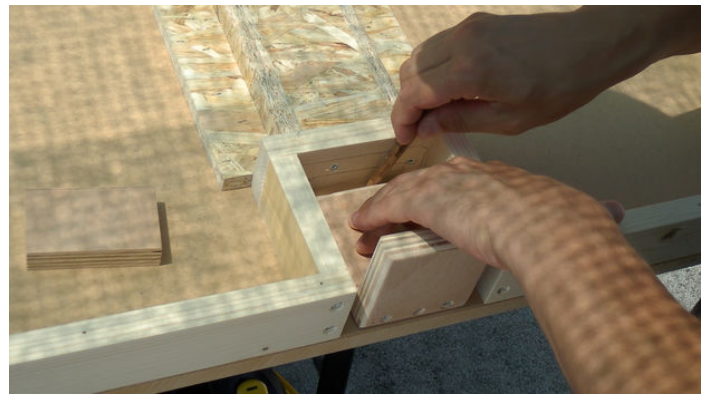
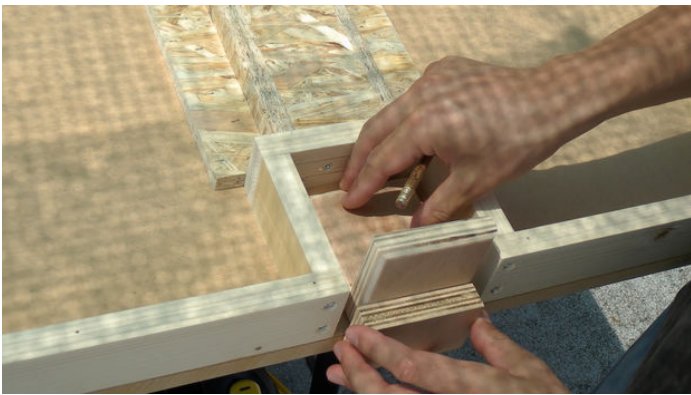
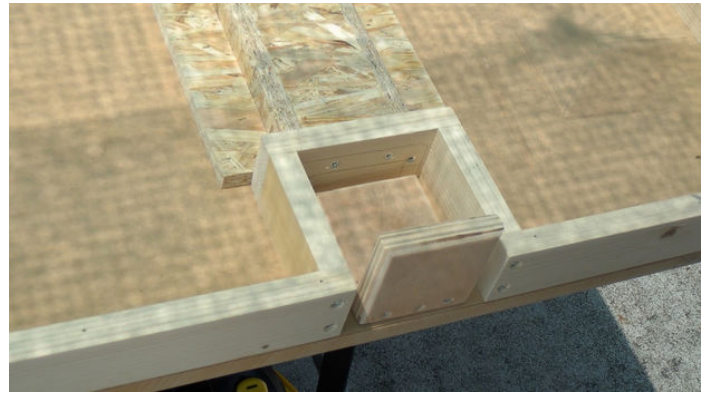
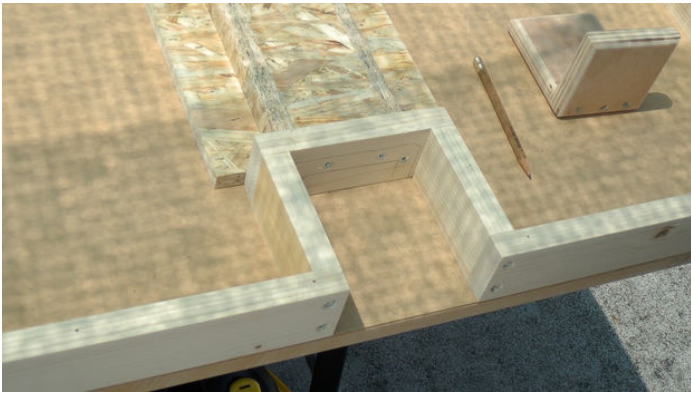




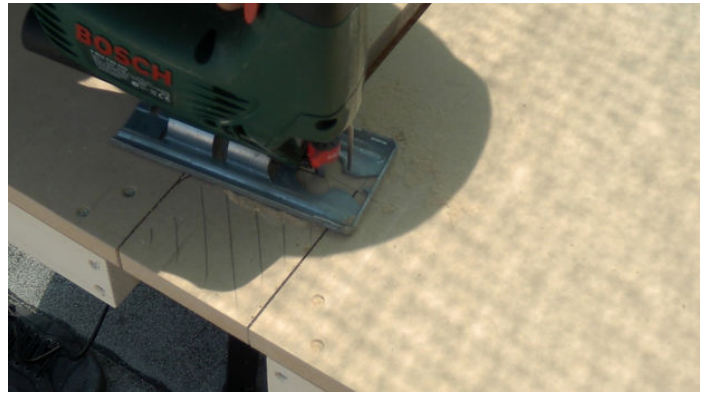
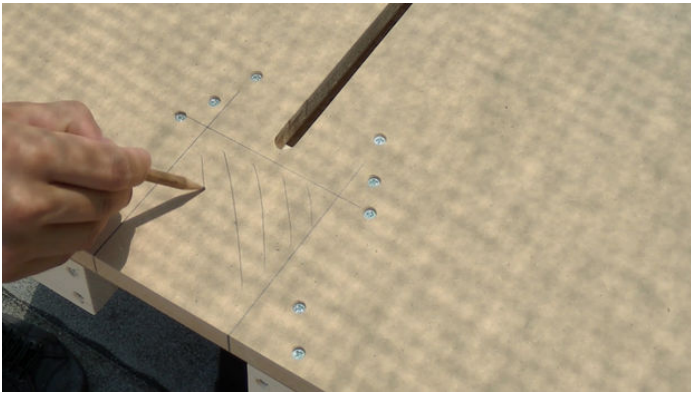


**Step 31:**

At this point, I put in place the piece of wood that I made before, marked it and cut the MDF piece.

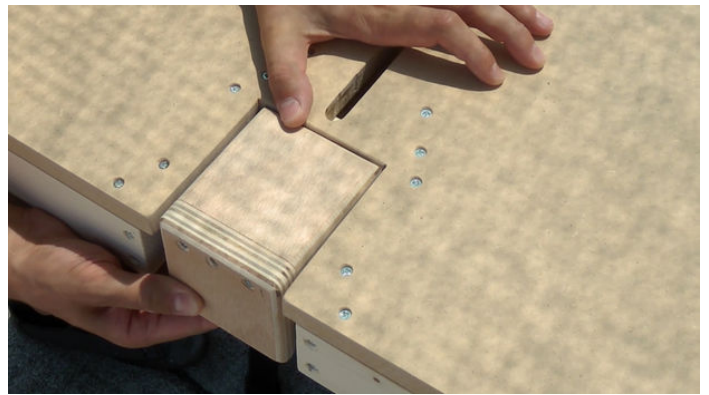
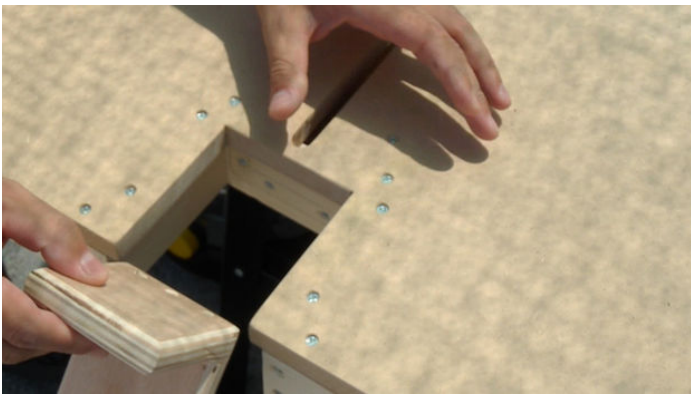
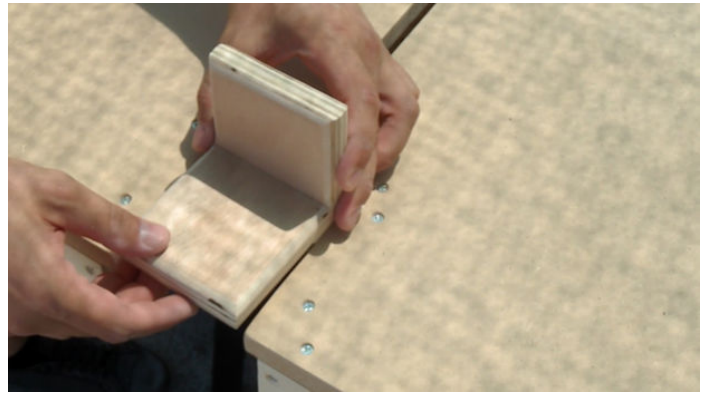
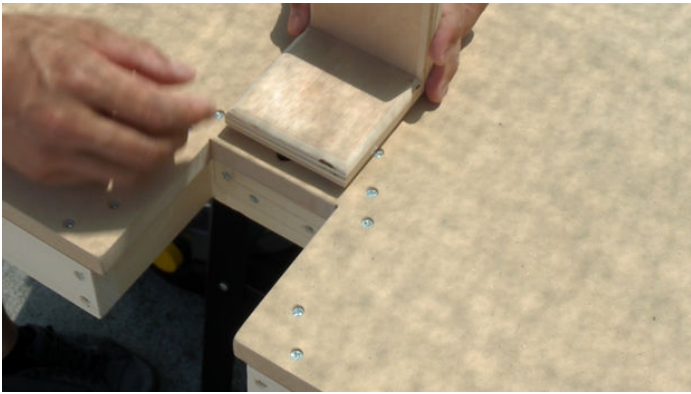






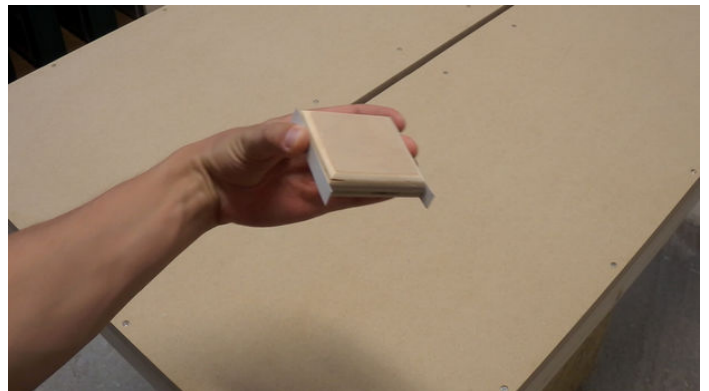
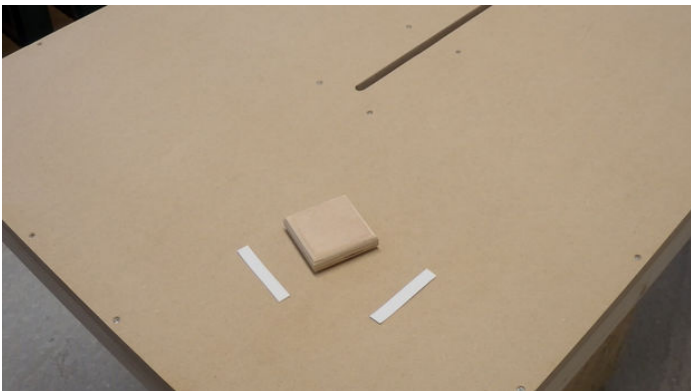
**Step 32:**

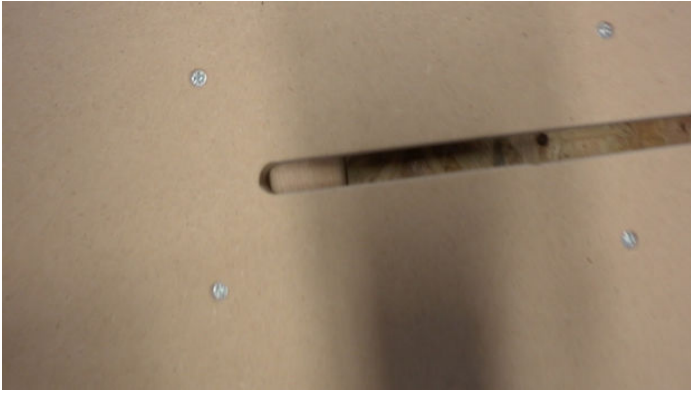
You will see later why I did that!



**Step 33:**

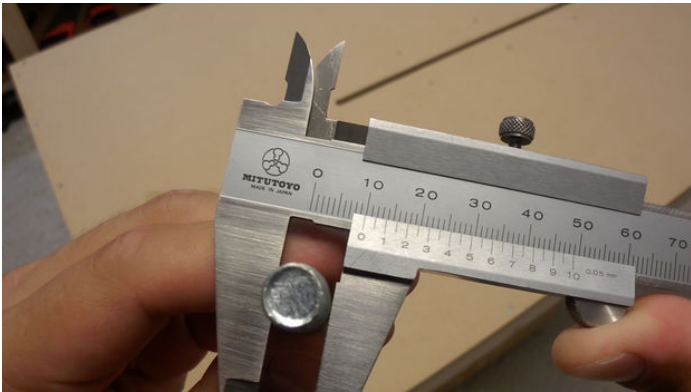
I used these two 1mm spacers and placed them together with the piece of plywood I cut before into the slot under the table saw, in order to mark the center of the wood and put the nut on it later.





**Step 34:**

I measured the thickness of the bolt and I made a 1cm hole but at first I used a smaller drill bit.







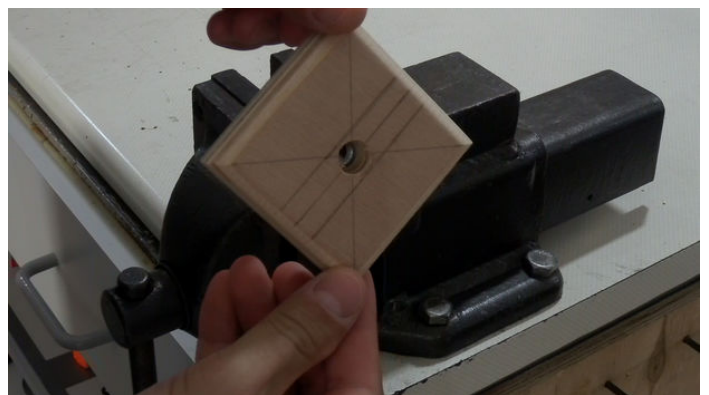
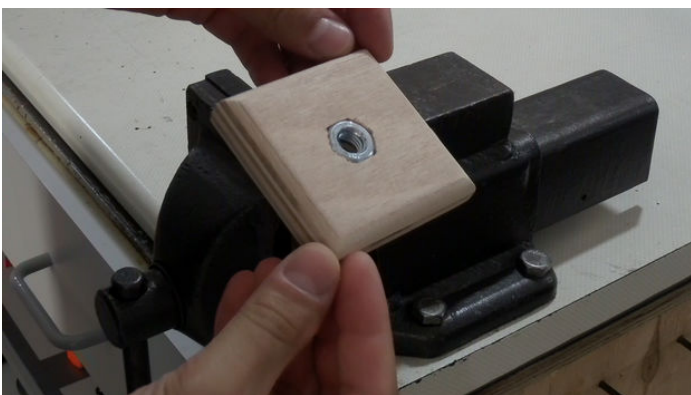
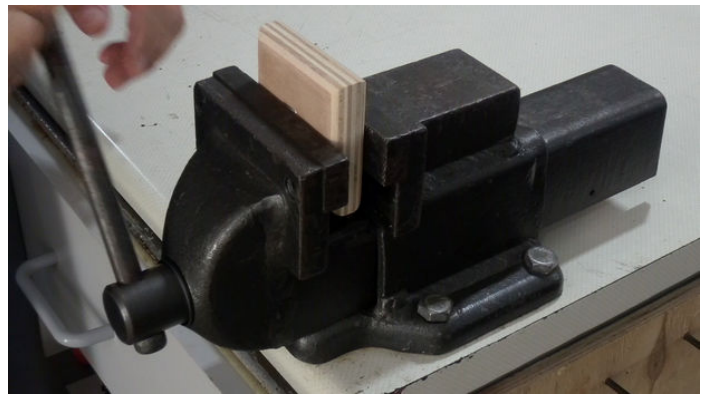
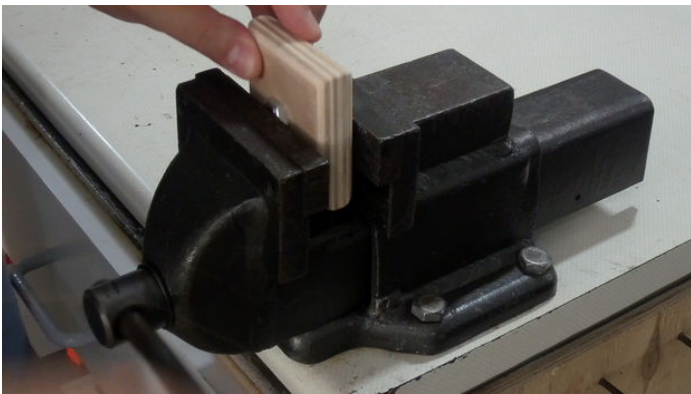
**Step 35:**

I also measured the nut of the bolt and I opened a hole equal to the width and thickness of it.



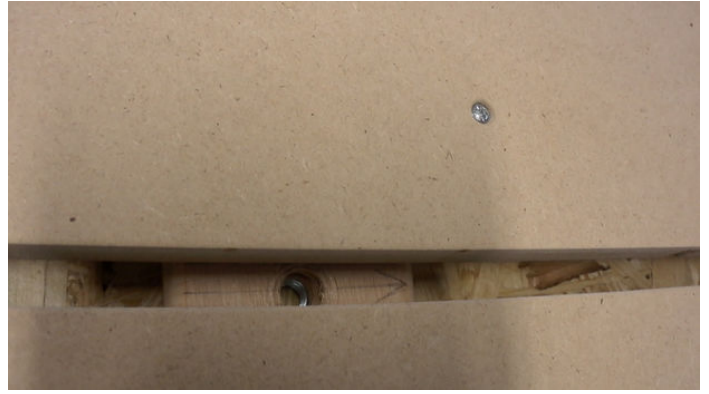
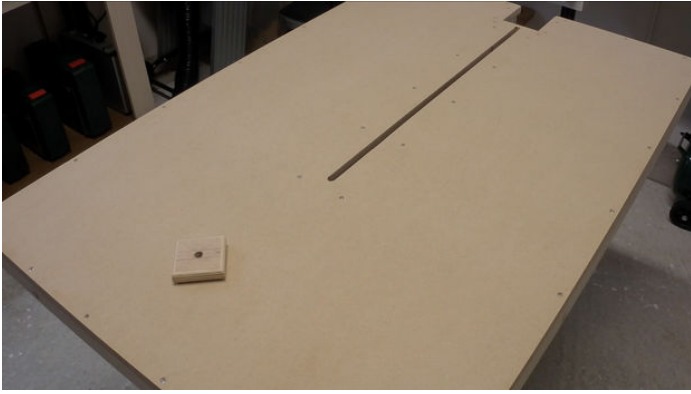
**Step 36:**

...and now we are ready to install the nut into the wood.



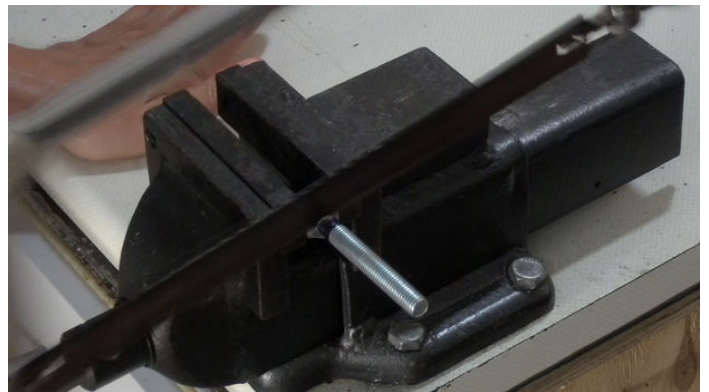
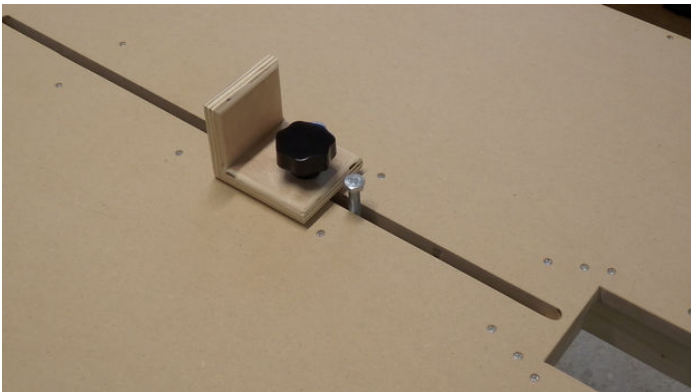
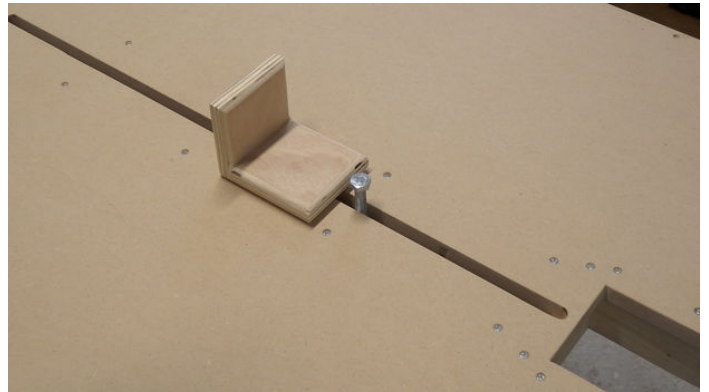
**Step 37:**

Then, I placed it into the slot under the table saw and it's ready!

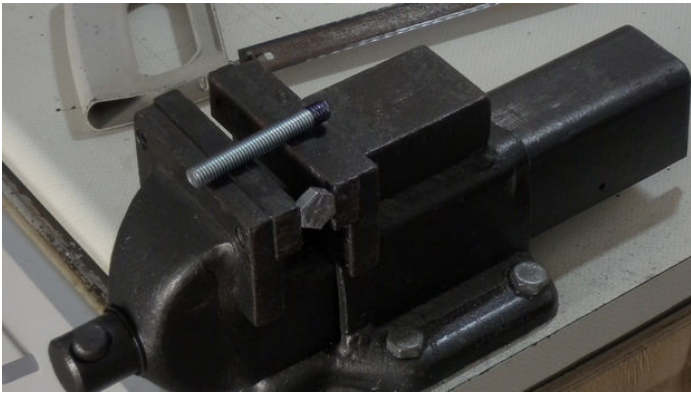


**Step 38:**

Now I measured the length needed and I removed the head of the bolt.

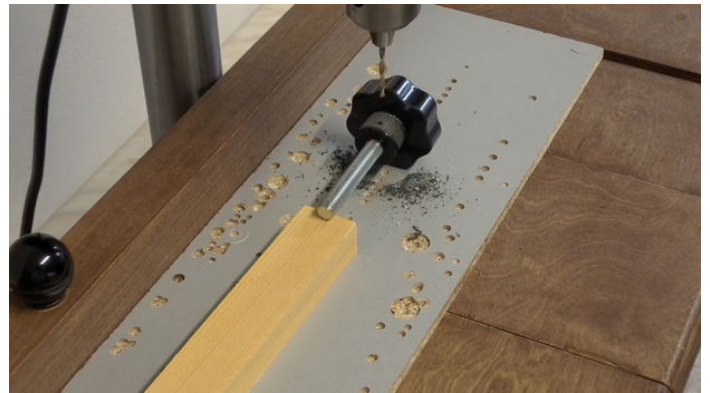
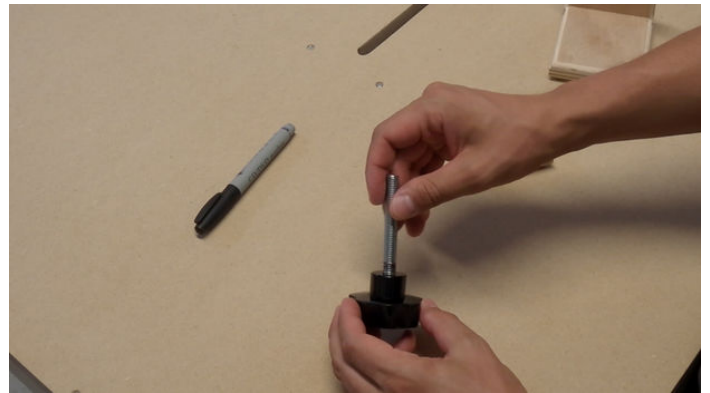






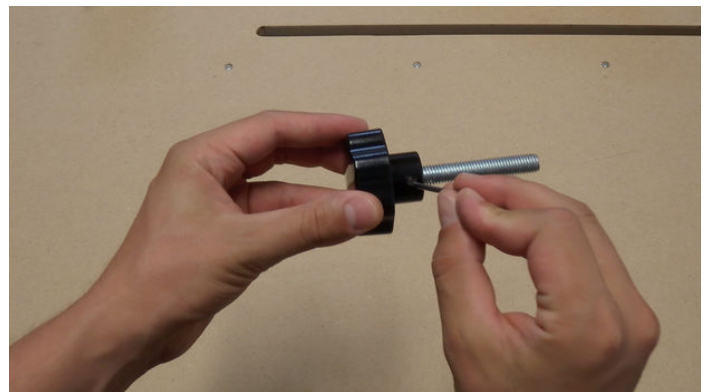
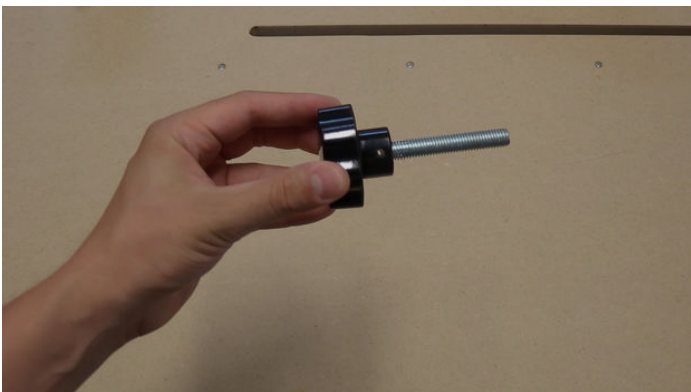
**Step 39:**

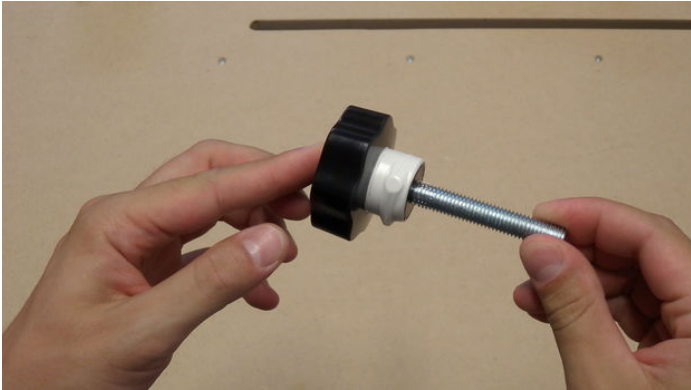
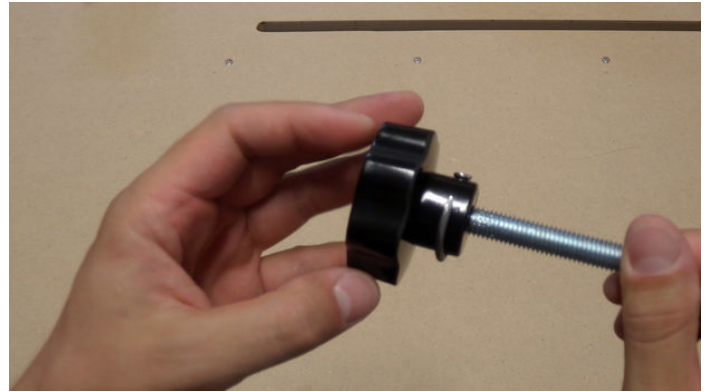
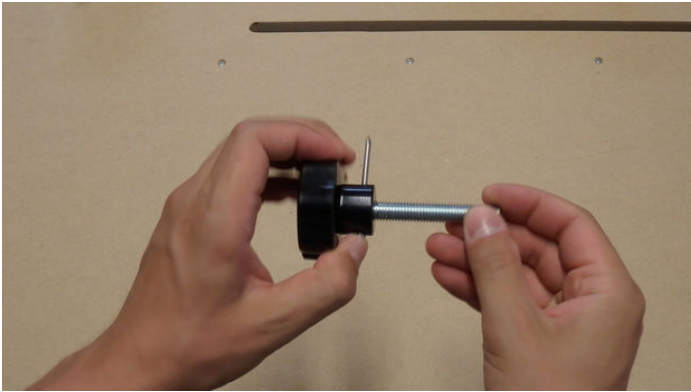
I screwed the bolt into the plastic handle and then drilled them from one side to the other, to make them one solid piece.



**Step 40:**

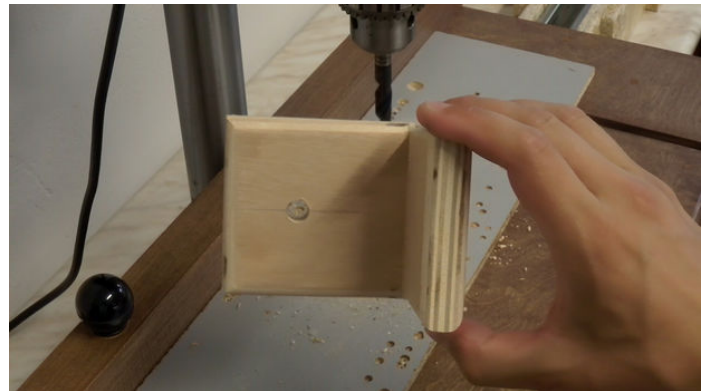
I put a nail into the hole, bent it with a hammer and then wrapped it with a pvc tape.





**Step 41:**

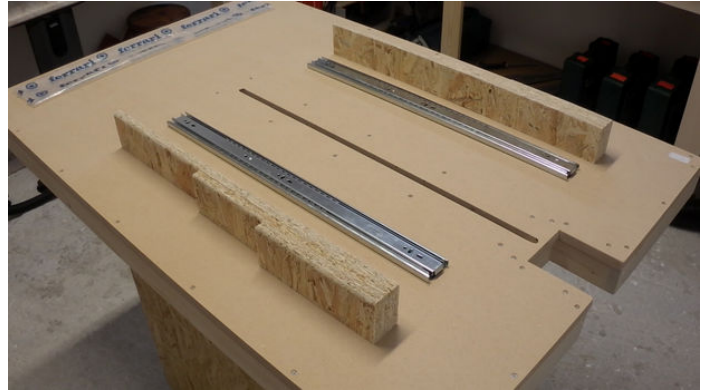
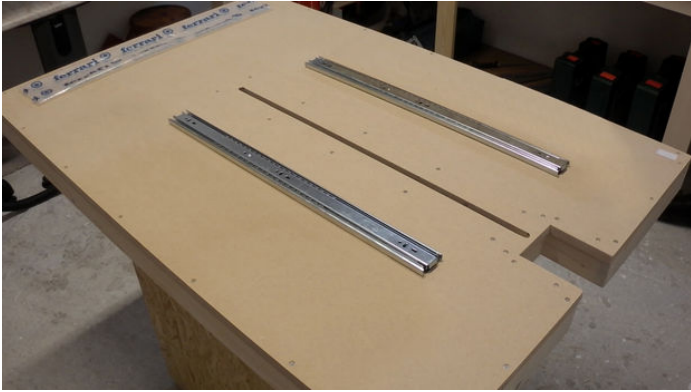
Also, I opened a 10mm hole to the other piece of wood.



**Step 42:**

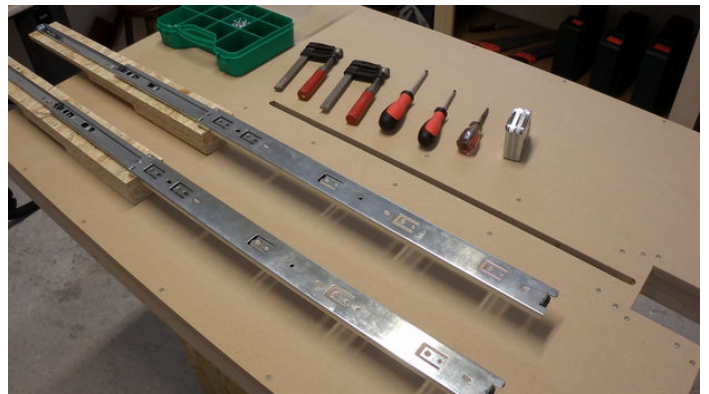
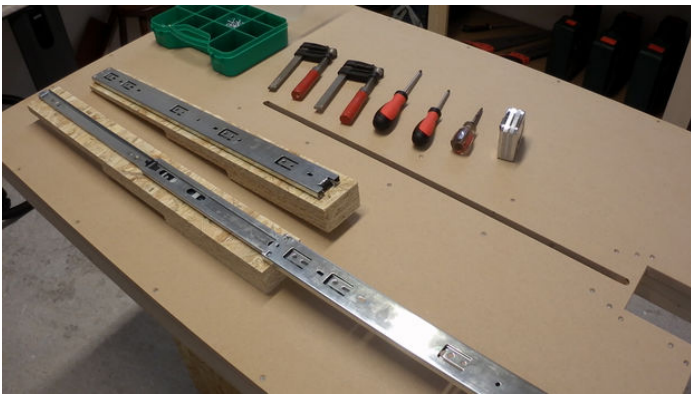
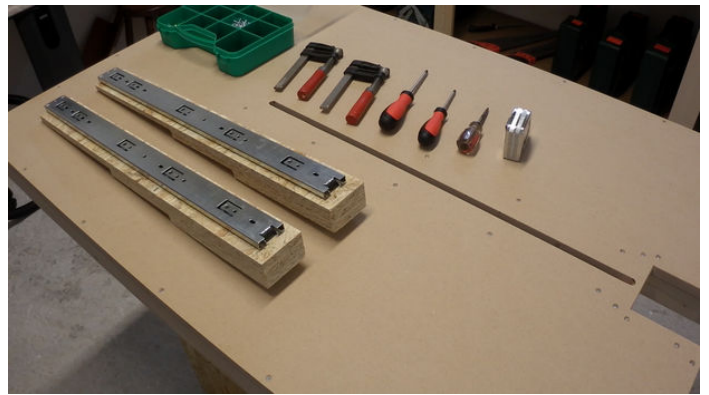
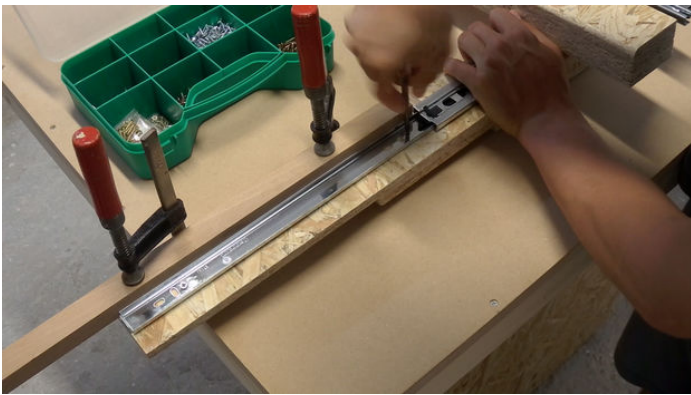
Now it's time to install the two heavy duty 60cm ball bearing drawer slides, on the two pieces of OSB.





**Step 43:**

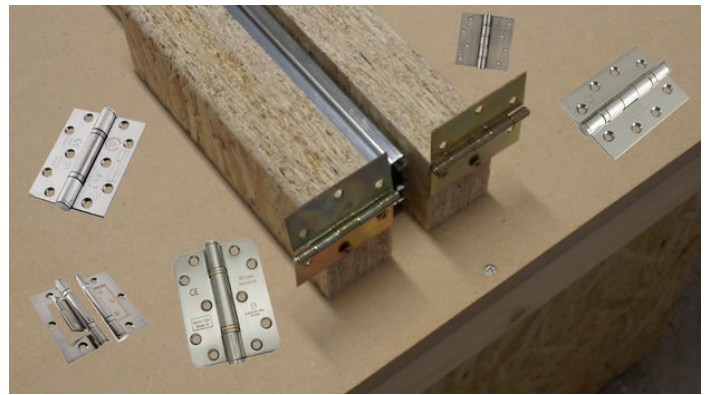
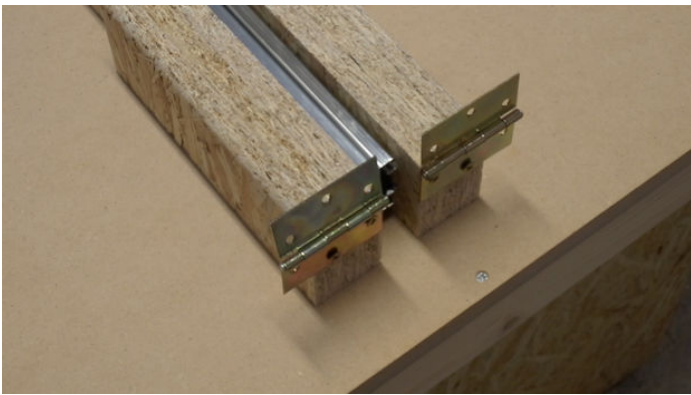
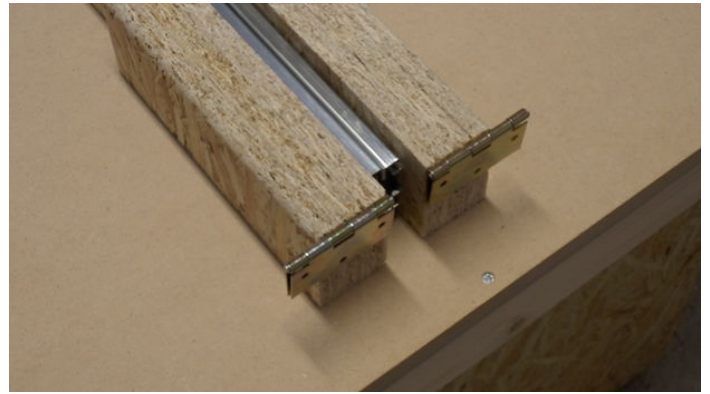
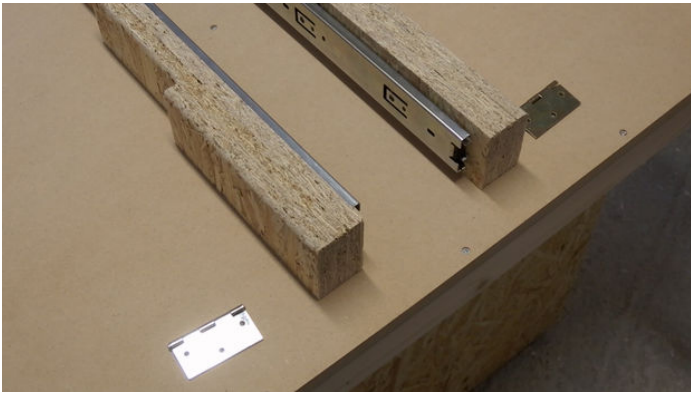
I clamped a straight piece of wood in order to install the slides correctly.





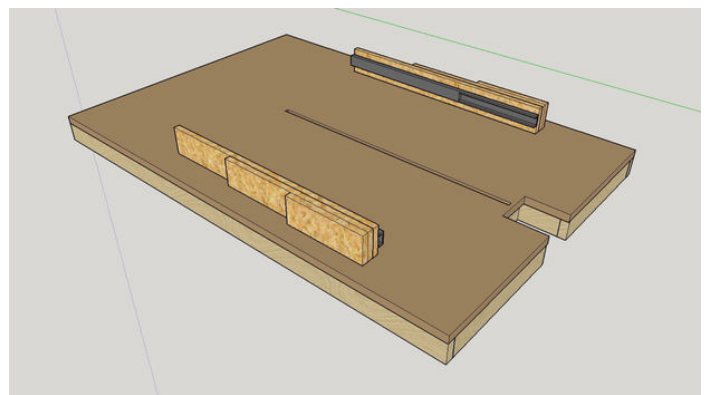
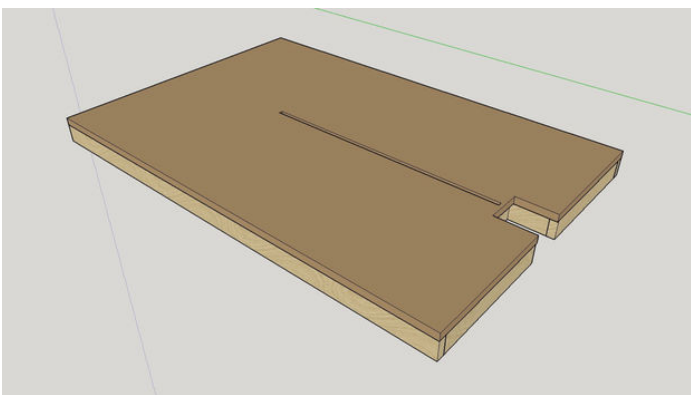
**Step 44:**

I found these hinges in my drawers but for better stability you can use heavy duty stainless steel door hinges.

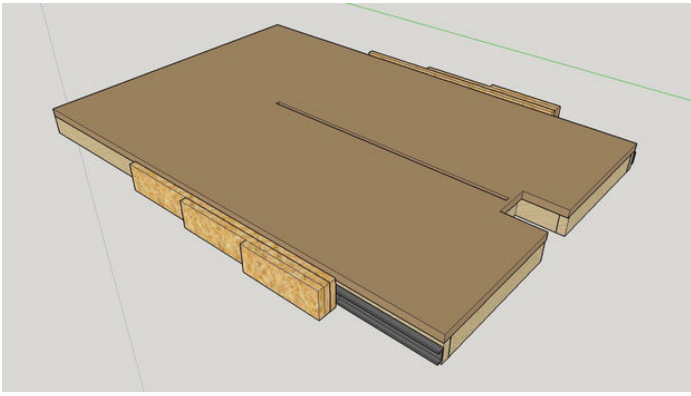


**Step 45:**

Then I installed these two pieces on the side of the table saw surface.

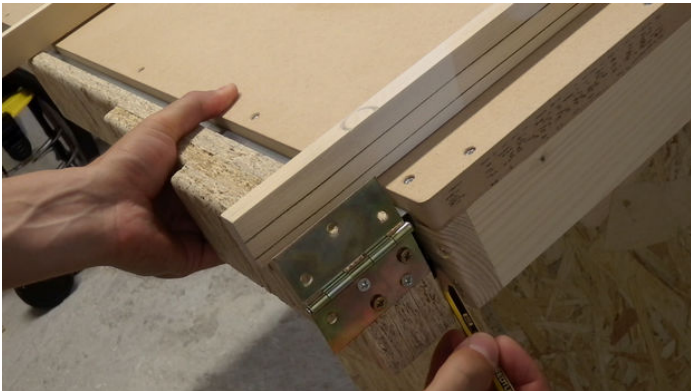




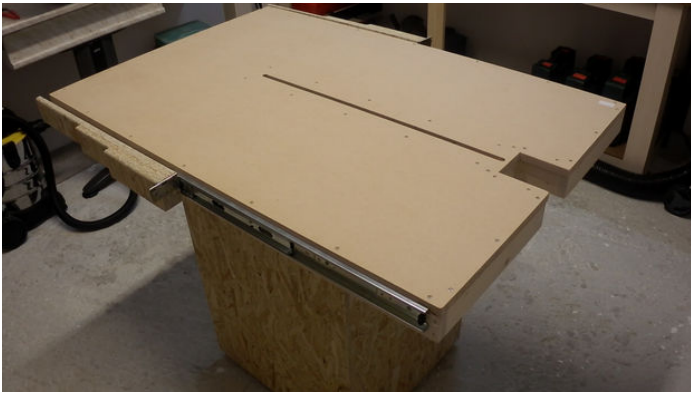


**Step 46:**

Aligned them, marked them and screwed them, with precision.

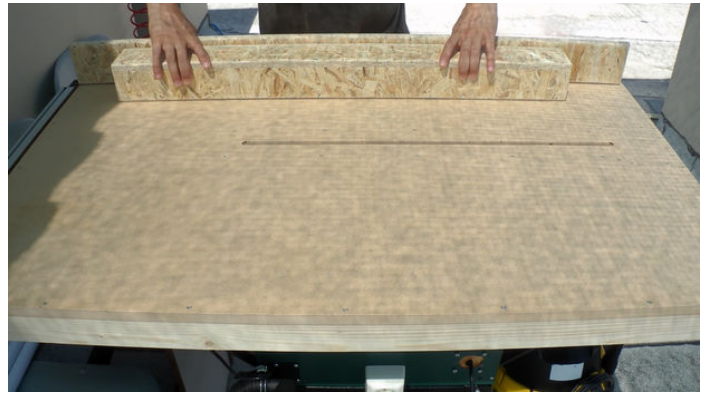
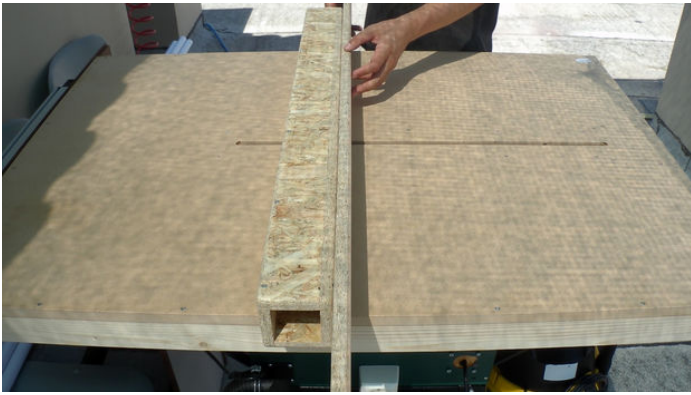
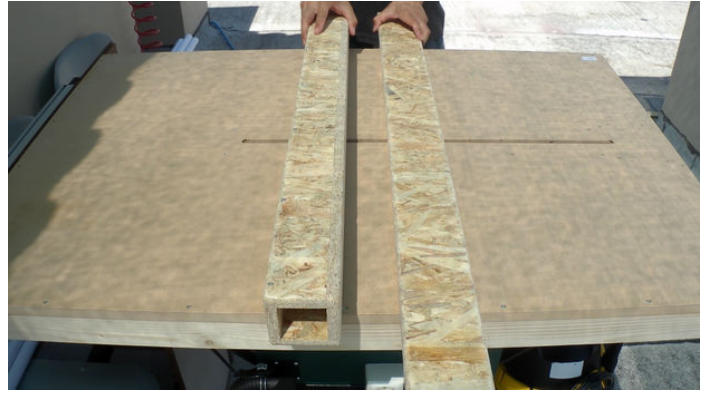




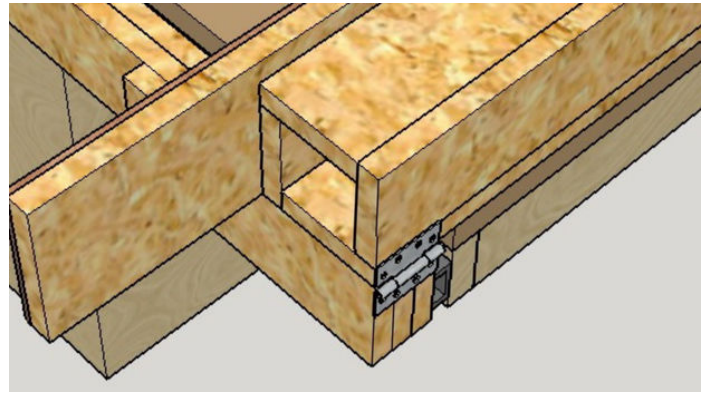
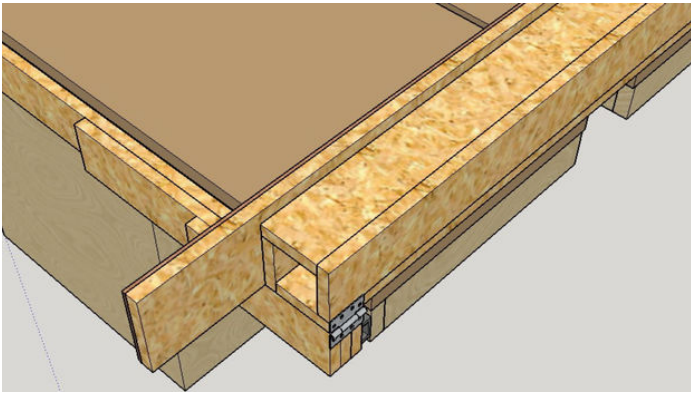


**Step 47:**

Also, I screwed these two pieces of the fence together and installed them on the two pieces of OSB with the hinges on, that I built before.

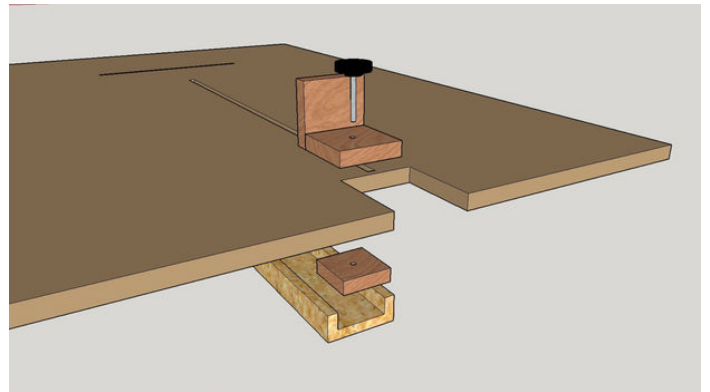
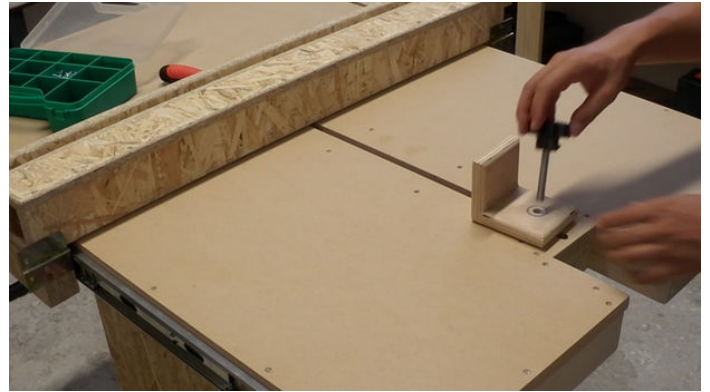


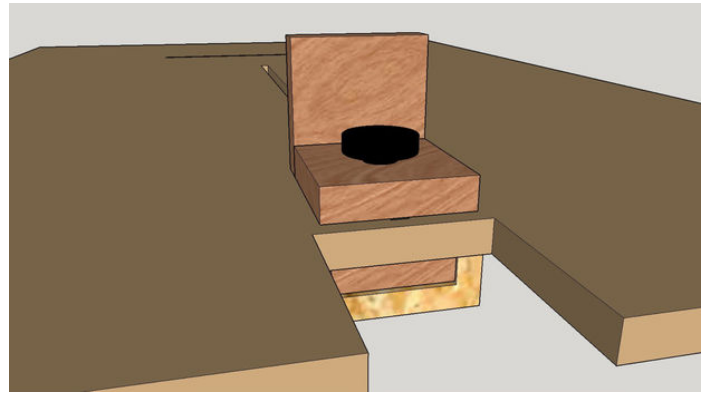
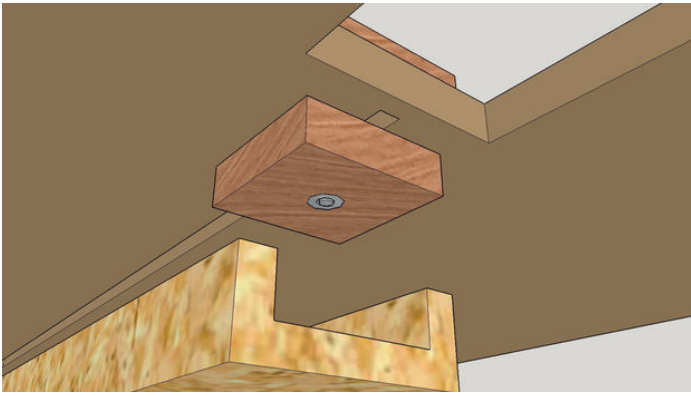
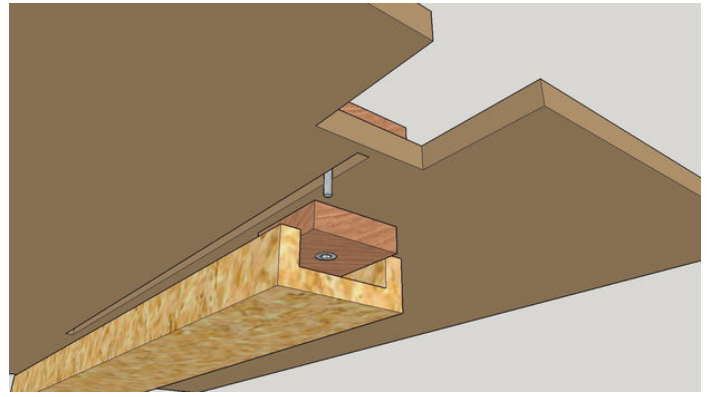
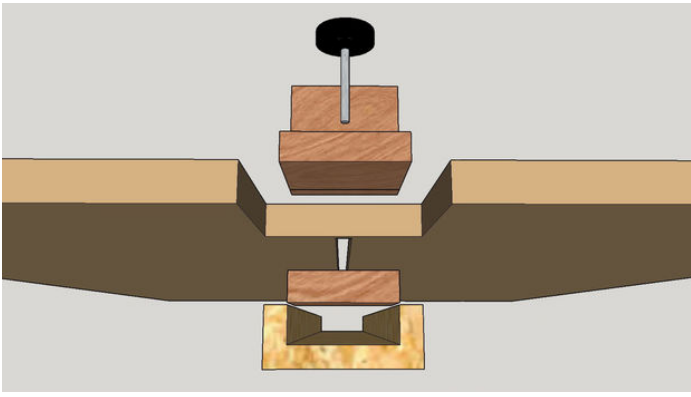




**Step 48:**

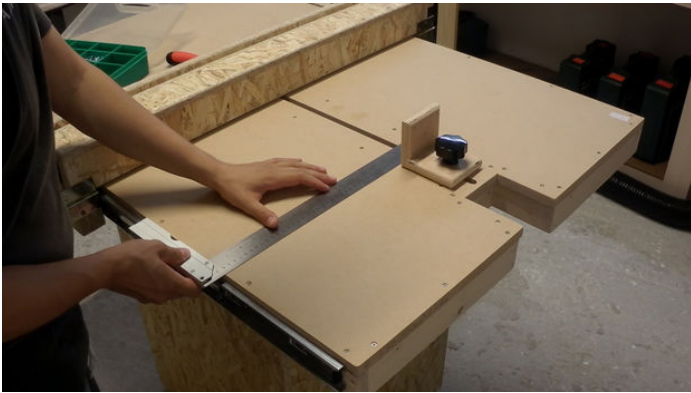
I placed the bolt with the handle and the piece of wood I drilled before and tightened them together with the other piece with the nut, which is into the slot, under the table saw.





**Step 49:**

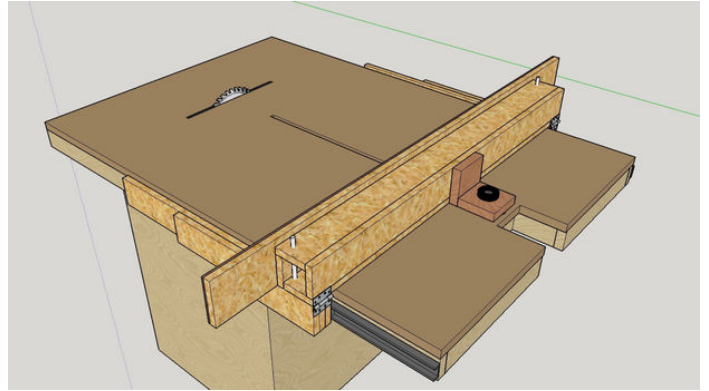
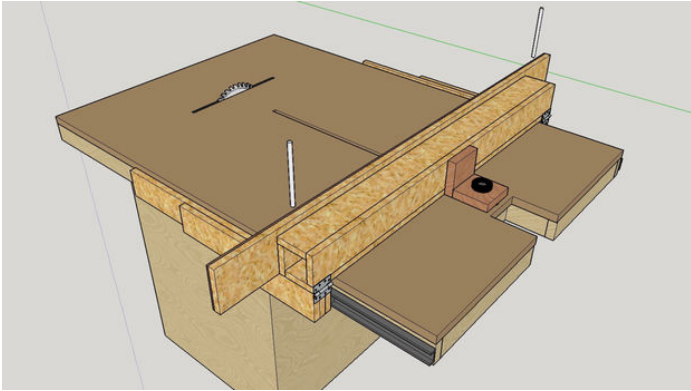
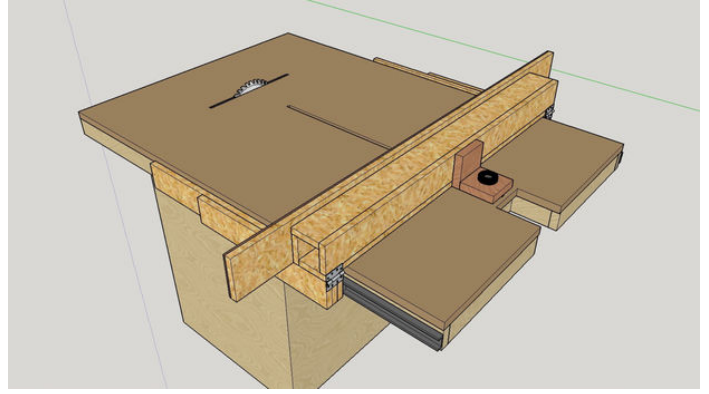
I aligned it and then installed the fence on it.





### Step 50:

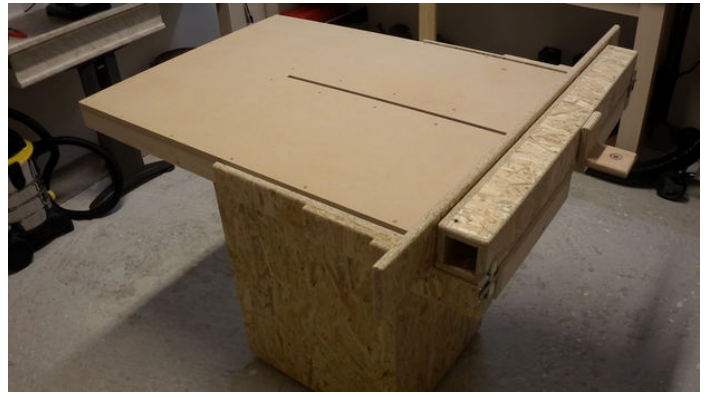
Now, I placed these two bolt safety pins, on each end of the fence, in order to keep it straight and steady, to prevent it from moving.



### Step 51:

Because I didn't have a drill long enough to make the hole directly, I made the right measurements and opened every hole separately and equal exactly to the diameter of the bolt safety pin, in order to fit in tight.



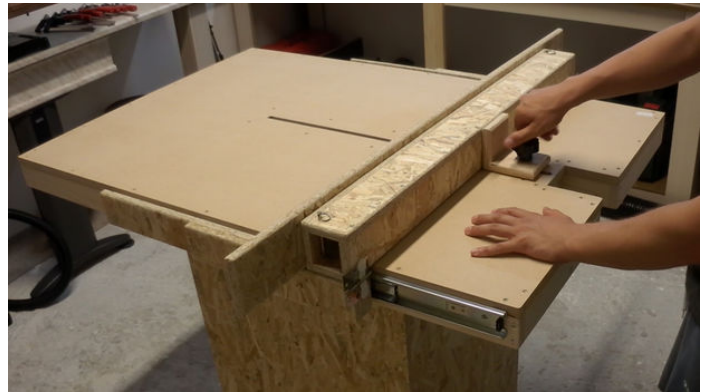
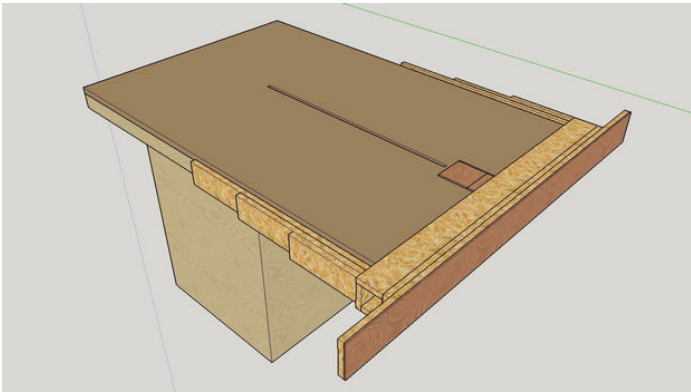
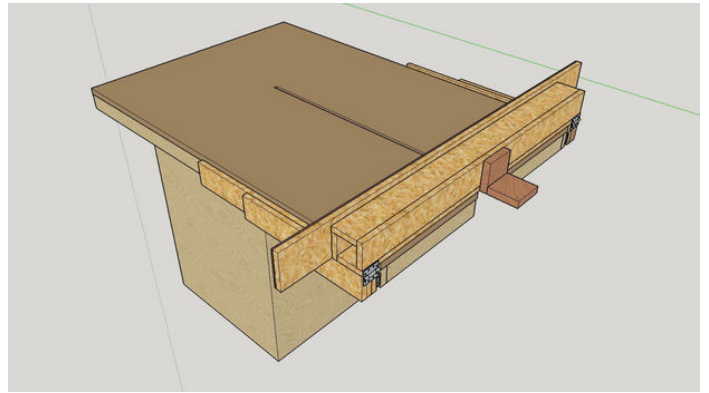
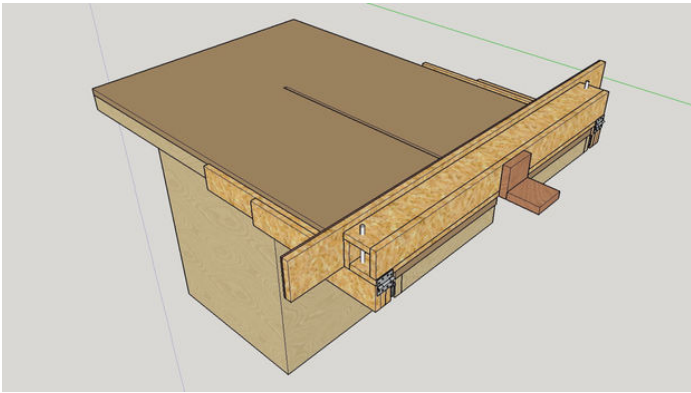
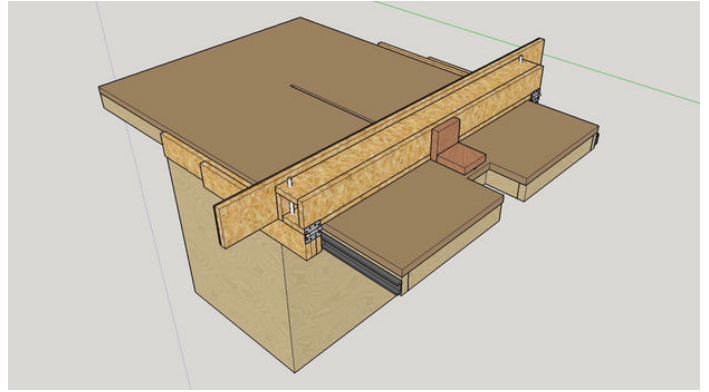
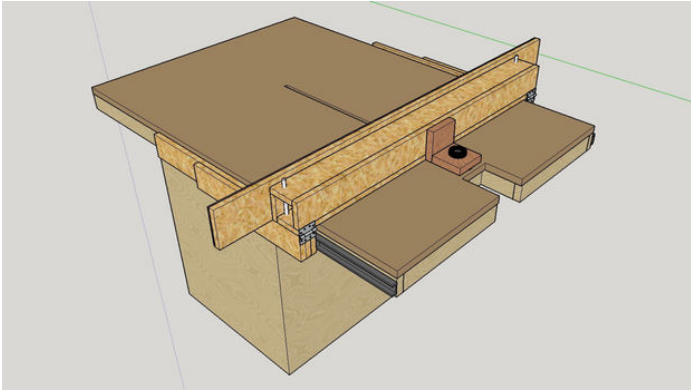


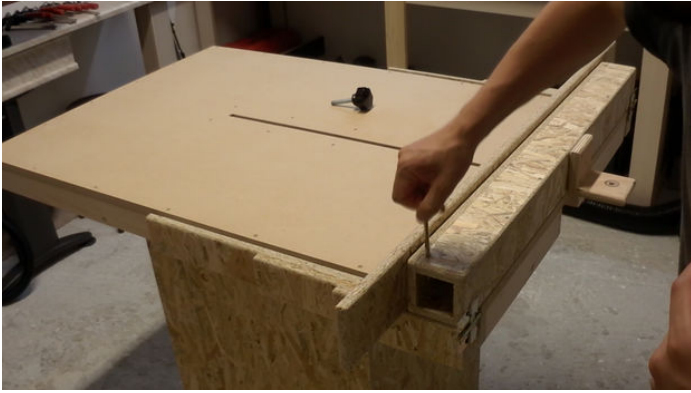
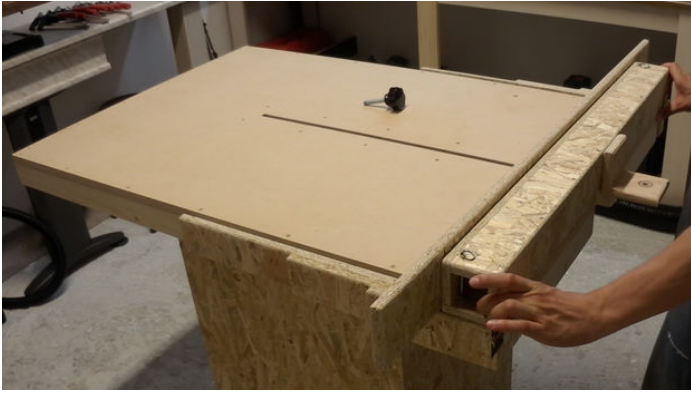




**Step 52:**

...aaaand... Lets go! Remove the handle, bring it to the edge, remove the bolt safety pins and turn it around to cut the long pieces of wood.



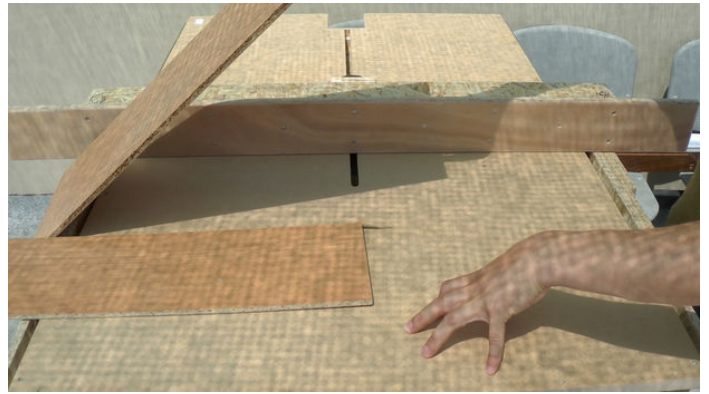
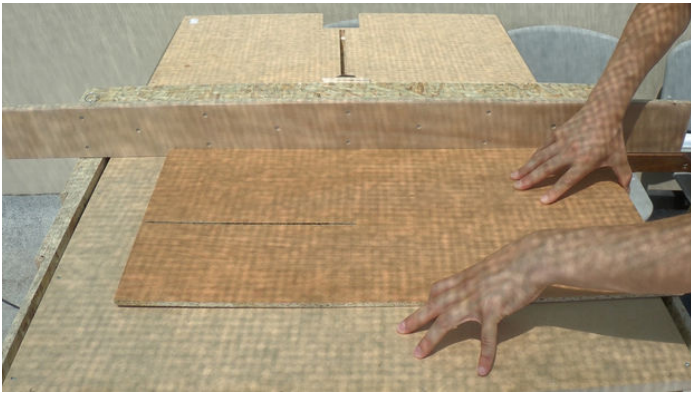
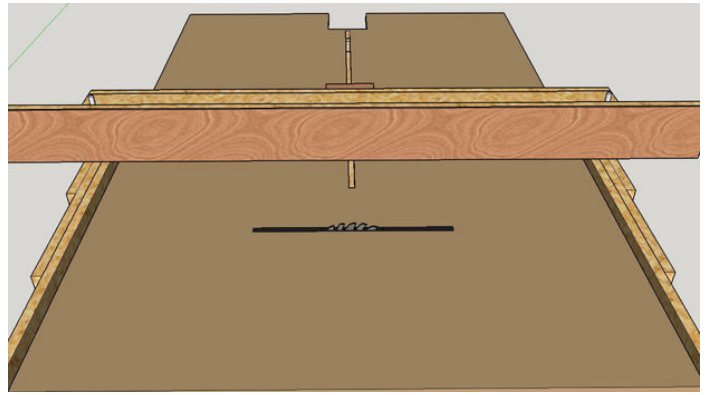
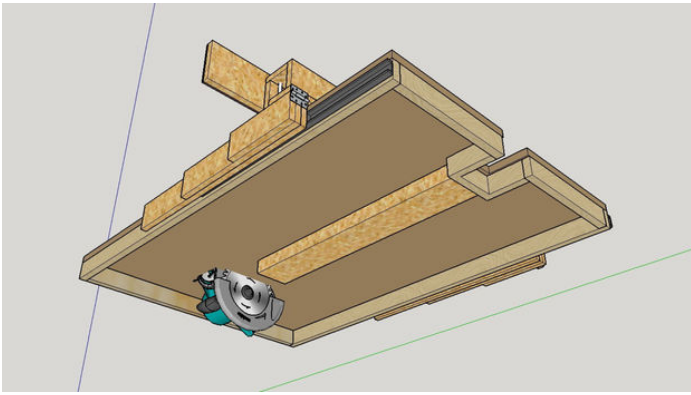






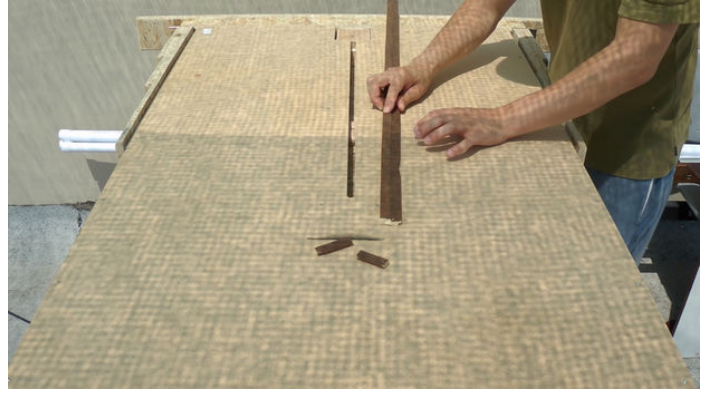
**Step 53:**

I placed a circular saw under the surface and we are ready to cut!



**Step 54:**

...and now the long piece!



**Step 55:**

Thanks for reading & I hope you liked it!

