

# DIY Alpha Murphy Bed

(Vertical Spring Kit Only Version)



It's like having your own shop!

**Assembly Instructions**

**Questions call 501.753.9699**

Designed to exceed International ISO 9002  
Standards for Residential Specifications  
Revised 06/12/2020

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## Step 1: Check Your Components

Thank you for your purchase of this Murphy bed hardware. We try to make this projects as easy as possible for you. Take a minute and check your contents.

### Hardware

Qty.	Frame Carton Items	Comments	✓
2	Frame End Sections	Identical Head & Foot	<input type="checkbox"/>
2	Frame Side Sections	Identical, Right or Left	<input type="checkbox"/>
3(5)	Stiffeners - Bed Face (King Size)	Space evenly between Frame Sides	<input type="checkbox"/>
2	Fold-away Legs	One Left - One Right	<input type="checkbox"/>
1	Leg Connector Rod	Stabilizes and Eases Leg Operation	<input type="checkbox"/>
<b>Hardware Card #3</b>			
14	Bolt 10-24x1/2" (M6x12mm) Black	Bolt Frame corners	<input type="checkbox"/>
2	Bolt 10-24x1 1/4" (M6 x 32mm) Black	Bolt Leg Stop Foot corners	<input type="checkbox"/>
16	Nut 10-24 (M6) Black Nylock	Use with #1214 & #1213	<input type="checkbox"/>
4	Angle 1"x1"x1 3/4" (25x25x44mm) Black	Use inside Frame corners	<input type="checkbox"/>
2	1/2"x3/4" (13x19mm) Round Black Cylinder	Use with #1213 as Leg Stop	<input type="checkbox"/>
<b>Hardware Card #4</b>			
2	1 1/2"x5/16" (T1.5x40mm) Black Washer	Secure Leg inside Frame	<input type="checkbox"/>
2	1 1/2"x.765" (T2.5x40mm) Black Washer	Secure Leg inside Frame	<input type="checkbox"/>
2	1 1/2"x.765" (T2.5x40mm) Black Nylon Washer	Between Leg & outside of Frame	<input type="checkbox"/>
2	Nut 5/16" (M8) Black Nylock	Secure Leg inside Frame	<input type="checkbox"/>
2	Bolt 1/4"-20 Black Hex Head	Attach Leg to Leg Rod	<input type="checkbox"/>
2	Star Washer for #1210	Attach Leg to Leg Rod	<input type="checkbox"/>
<b>Hardware Card #5</b>			
1	Nylon Web Strap with Buckle	Secure Mattress to Bed Frame	<input type="checkbox"/>
2	3/4"x1/4" (T1.5x25mm) Washer	Secure Nylon Web Strap to Bed Face Panel under Mattress	<input type="checkbox"/>
2	#8x5/8" (M4x15mm) Wood Screw	Secure Nylon Web Strap	<input type="checkbox"/>
<b>Hardware Card #7 - King size includes 2 bags</b>			
110	#8x5/8" (M4x15mm) Wood Screw	Attach Steel Bed Frame to Bed Face	<input type="checkbox"/>

Qty.	Mechanism Carton Items	Comments	
1	Lift Mechanism - Right Side	Attach to Right Side Panel	<input type="checkbox"/>
1	Lift Mechanism - Left Side	Attach to Left Side Panel	<input type="checkbox"/>
2	#1 Bags containing 9 Springs each	Install correct number in each Mechanism	<input type="checkbox"/>
1	13" Plastic Pipe	Used to set the Lift Mechanisms	<input type="checkbox"/>
<b>Hardware Card #2</b>			
10	Machine Screw 5/16-18 x 1 1/4"	To attach Lift Mechanisms to Side Panels	<input type="checkbox"/>
4	Hex Head Bolt 5/16-18 x 1"	Attach Mechanism to Frame Side section	<input type="checkbox"/>
2	Allen Head Bolt 5/16-18 x 1"	Position Mechanism Arm on Frame Side section	<input type="checkbox"/>
16	Hex Head Nylock Nut	Secure Bolts and Screws	<input type="checkbox"/>
1	Allen Wrench 5/16"	For Allen Head bolts	<input type="checkbox"/>

Step 1

Below are the cut list and hardware needed for your size project.

Single/Twin Cut List

Overall Cabinet Dimensions

**Mattress Size:** 39" x 75" (12" Max Thickness) 44 1/2"w x 85 1/4"h x 16"d (Projection from wall: 85")

Qty.	Description	Width	Length	Material
2	(A) Bed Face Panels	21 1/4"	77 5/16	(3/4" Plywood)
2	(B) Verticals	16"	85 1/4	(3/4" Plywood)
1	(C) Headboard	14 1/4"	43	(3/4" Plywood)
1	(D) Top Panel	14 1/2"	43	(3/4" Plywood)
1	(E) Top Facia	2 3/4"	43"	(3/4" Plywood)
1	(F) Bottom Rear Base	6"	43"	(3/4" Plywood)
1	(G) Bottom Kick	4"	43"	(3/4" Plywood)
2	(H) Header Cleats	1 1/2"	14 1/2"	(3/4" solid wood)
1	(I) Header Stop	1	43	(3/4" Solid Wood)
12	Brackets	1 x 1 x 1 3/4" Other size brackets can be substituted.		
Various	3/4" screws			
18	1 1/2" screws			
10	1 1/4" finish nails			
16	2" Screws			
3	3" Screws			
50'	Veneer Tape	Match the species of wood you are using		

**Parts (A) - (G) require 3 sheets of plywood for a Twin Size**

## Full/Double Cut List

Overall Cabinet Dimensions

**Mattress Size: 54" x 75" (12" Max Thickness) 59 1/2"w x 85 1/4"h x 16"d (Projection from wall: 85")**

Qty.	Description	Width	Length	Material
4	(A) Bed Face Panels	14 3/8"	77 5/16	(3/4" Plywood)
2	(B) Verticals	16"	85 1/4	(3/4" Plywood)
1	(C) Headboard	14 1/4"	58"	(3/4" Plywood)
1	(D) Top Panel	14 1/2"	58"	(3/4" Plywood)
2	(E) Top Facia	2 3/4"	58"	(3/4" Plywood)
1	(F) Bottom Rear Base	6"	58"	(3/4" Plywood)
1	(G) Bottom Kick	4"	58"	(3/4" Plywood)
2	(H) Header Cleats	1 1/2"	14 1/2"	(3/4" Solid wood)
1	(I) Header Stop	1	58	(3/4" Solid Wood)
12	Brackets	1 x 1 x 1 3/4" Other size brackets can be substituted.		
Various	3/4" screws			
18	1 1/2" screws			
10	1 1/4" finish nails			
16	2" Screws			
3	3" screws			
50'	Veneer Tape	Match the species of wood you are using		

**Parts (A) - (G) require 4 sheets of plywood for a Full Size**

## Queen Cut List

Overall Cabinet Dimensions

**Mattress Size:** 60" x 80" (12" Max Thickness) 65 1/2"w x 90 1/4"h x 16"d (Projection from wall: 90")

Qty.	Description	Width	Length	Material
4	(A) Bed Face Panels	15 7/8"	82 5/16"	(3/4" Plywood)
2	(B) Verticals	16"	90 1/4"	(3/4" Plywood)
1	(C) Headboard	14 1/4"	64"	(3/4" Plywood)
1	(D) Top Panel	14 1/2"	64"	(3/4" Plywood)
2	(E) Top Facia	2 3/4"	64"	(3/4" Plywood)
1	(F) Bottom Rear Base	6"	64"	(3/4" Plywood)
1	(G) Bottom Kick	4"	64"	(3/4" Plywood)
2	(H) Header Cleats	1 1/2"	14 1/2"	(3/4" Solid Wood)
1	(I) Header Stop	1	64	(3/4" Solid Wood)
12	Brackets	1 x 1 x 1 3/4" Other size brackets can be substituted.		
Various	3/4" screws			
18	1 1/2" screws			
10	1 1/4" finish nails			
16	2" Screws			
3-4	3" Screws			
50'	Veneer Tape	Match the species of wood you are using		

**Parts (A) - (G) require 4 sheets of plywood for a Queen Size**

# King Cut List

Overall Cabinet Dimensions

**Mattress Size:** 76" x 80" (12" Max Thickness) 81 1/2"w x 90 1/4"h x 16"d (Projection from wall: 90")

Qty.	Description	Width	Length	Material
4	(A) Bed Face Panels	19 7/8"	82 5/16"	(3/4" Plywood)
2	(B) Verticals	16"	90 1/4"	(3/4" Plywood)
1	(C) Headboard	14 1/4"	80"	(3/4" Plywood)
1	(D) Top Panel	14 1/2"	80"	(3/4" Plywood)
2	(E) Top Facia	2 3/4"	80"	(3/4" Plywood)
1	(F) Bottom Rear Base	6"	80"	(3/4" Plywood)
1	(G) Bottom Kick	4"	80"	(3/4" Plywood)
2	(H) Header Cleats	1 1/2"	14 1/2"	(3/4" Solid Wood)
1	(I) Header Stop	1	80	(3/4" Solid Wood)
12	Brackets	1 x 1 x 1 3/4" Other size brackets can be substituted.		
Various	3/4" screws			
18	1 1/2" screws			
10	1 1/4" finish nails			
16	2" Screws			
3-4	3" Screws			
50'	Veneer Tape	Match the species of wood you are using		

## Tools Needed

- Power Drill
  - Drill bits 1/8", 3/16", 5/8" countersink
- Power Saw, Table Saw or Circular Saw
- Jigsaw or Coping Saw
- Phillips-Head screwdriver or bits for drill
- Tape Measure
- Hammer
- Clamps
- Household Iron for Veneer Tap and Utility Knife
- 1/2" socket, wrench, or driver

## Cut Parts

Cut parts according to your size cut list.

## Step 1: Edge Band your parts

Most home stores will have rolls of veneer edge banding to match your plywood. This edge banding can be ironed on using a household iron.

If using iron, empty all the water out to eliminate any steam. Turn the steam settings off and use the Cotton setting.

Not all edges need to be banded. Only those that will be seen. Below is a list of what edges should receive the edge banding.

### Step 1-1

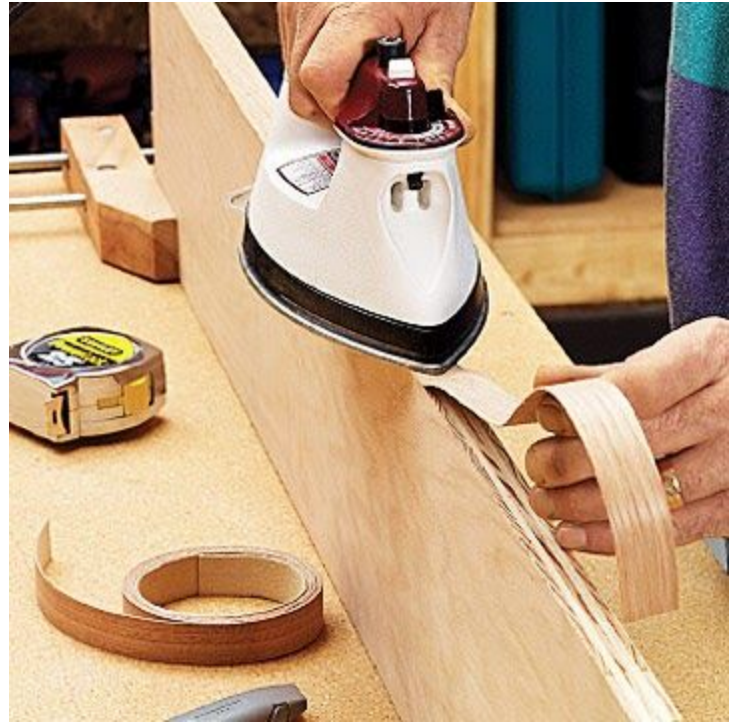
Cut a piece of edge banding about 1" longer than the length of the panel that you are banding. You can use scissors to cut it or simply fold it in half and it will snap apart.

### Step 1-2

Turn on the clothes iron and set the temperature to the "medium" or "cotton" setting. If possible clamp the panel in the upright position so the iron can be held horizontally.

### Step 1-3

Starting at one end of the banding and work towards the opposite end. Move the iron slowly along the banding while applying downward force



You should be able to see a small bead of adhesive expand out from the underside of the banding if the adhesive is activating. To get the best bond possible, pressure should be applied behind the iron with a block of wood.

### Step 1-4

Apply pressure until the adhesive cools and hardens.

*Occasionally the side edges of the banding can lift slightly from the substrate. To fix this, simply use the block of wood (held at a 45 degree angle) to press the edge back onto the substrate while the adhesive is still warm.*

### Step 1-5

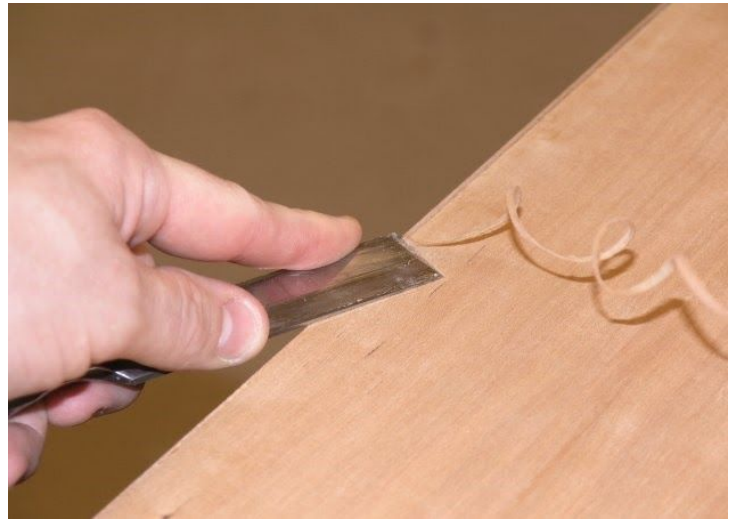
End trim the overhang by using a razor knife. Put the block on top that you were using to apply pressure and use the razor knife to trim off the ends.



## Step 1-6

A flush trimming tool is inexpensive and definitely makes the trimming process easy and 99% fool-proof.

Simply press the trimmer against the face of the panel and slide it forward so that the blade cuts off the excess banding. To get a clean edge, you must pay attention to the direction of the grain. Most edge banding has a reasonably straight grain but there is always a slight angle. The best cut comes from sliding the trimmer in the direction of the grain as shown below. Cutting in any other direction will cause tear out.



A sharp chisel can also be used to trim the edges. Be sure to skew the chisel so that the pressure forces the banding against the wood edge as shown. This method often leaves a bit of tear-out on the banding but the next step will smooth them out with very little effort.

## What to edge band?

- 4-(A) Bed Face Panels
  - All outside edges.
  - On the outside panels the top (short) and outside (long) edge
  - On the inside panels just the top (short) edge
  - *Note: twin will only have the two outside panels.*
- 2-(B) Verticals
  - One long edge
- (C) Headboard
  - One long edge
- (D) Top Panel
  - 3 edges
  - 1 front (long) edge and two side (short) edges.
- (E) Top Facia
  - One long edge
- (F) Bottom Rear Base
  - One long edge
- (G) Bottom Kick
  - One long edge

## Step 2: Build the Top Panel/Header

Using the (D) Top Panel, (E) Top Facia and, 2- (H) Header Cleats assemble the Header.

2-1 Attach the Top Facia to the Top Panel with 1 ¼" finish nails (not supplied). Top Facia will overlap the lower side of the Top panel by ½" (see figure 2-1)

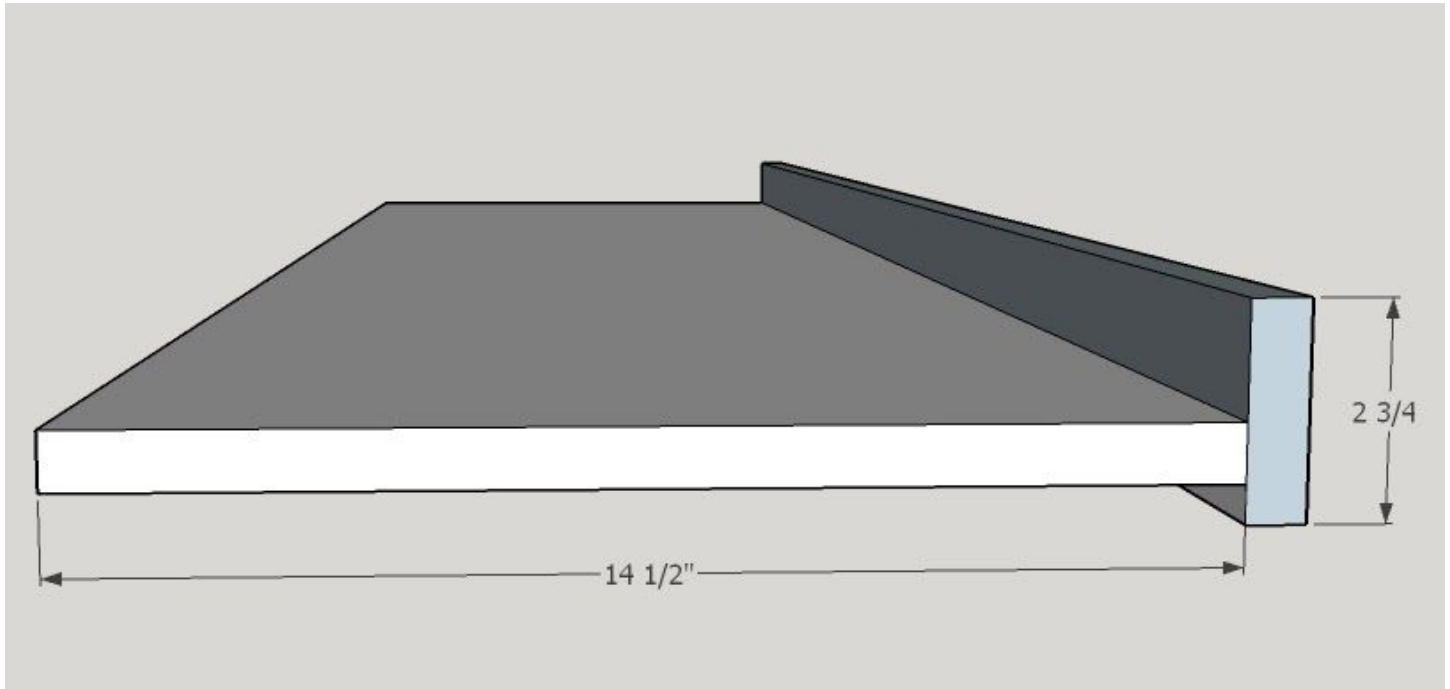
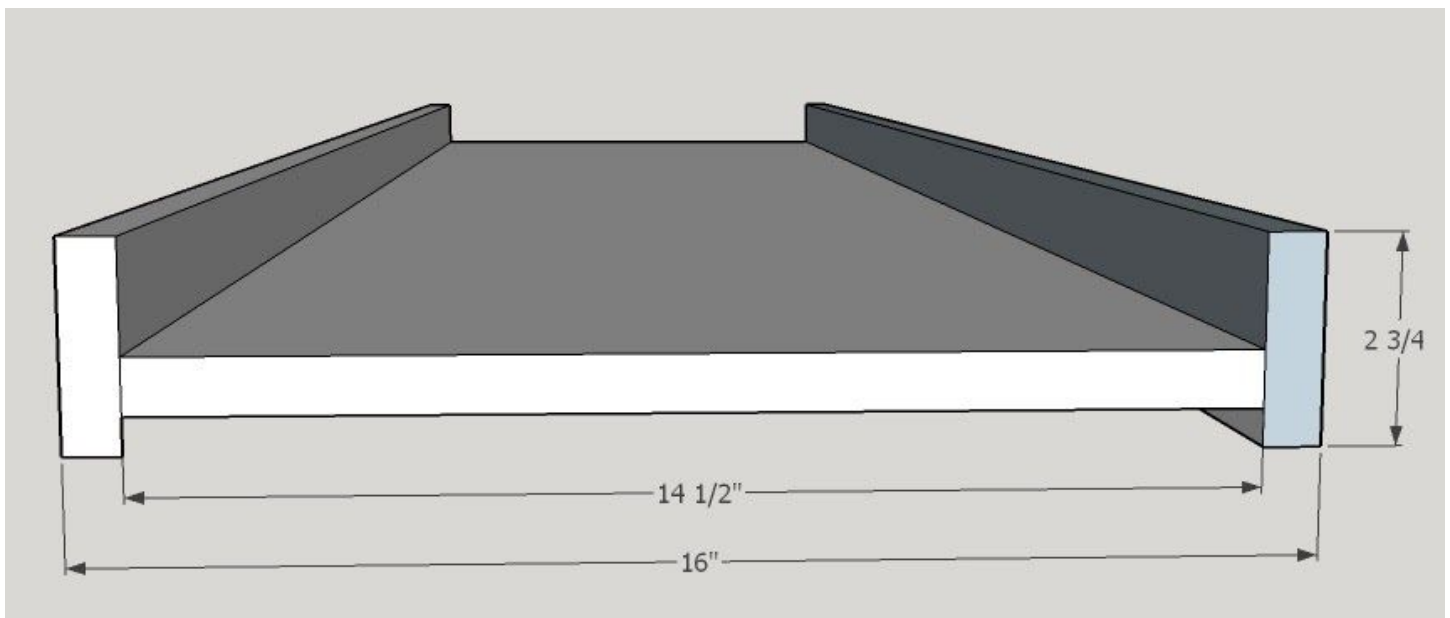


Figure 2-1

2-2 Attach the Back Facia to the top panel. Pre-drill holes using ⅛" bit about every 8-10". Use a countersink so that the screw will be slightly recessed when inserted. Insert 2" screw (Not supplied).



2-3 Attach the Header Cleats with 4-1 1/4" screws (Not supplied) on each end. Flush the cleats with the edge of the Top Facia (see figure 2-2)

2-4. Drill holes in the Header cleats as shown in figure 2-2. The holes will be use in the installation process.

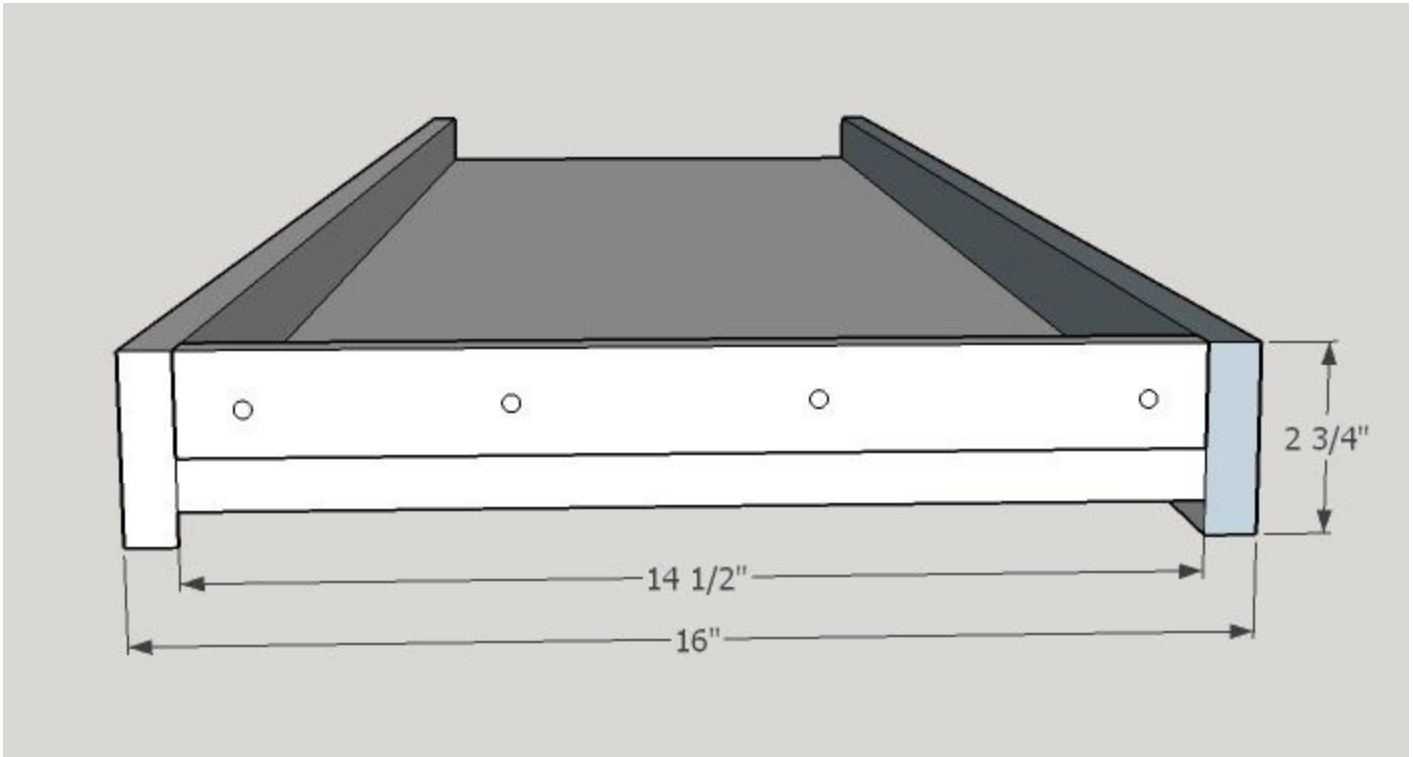
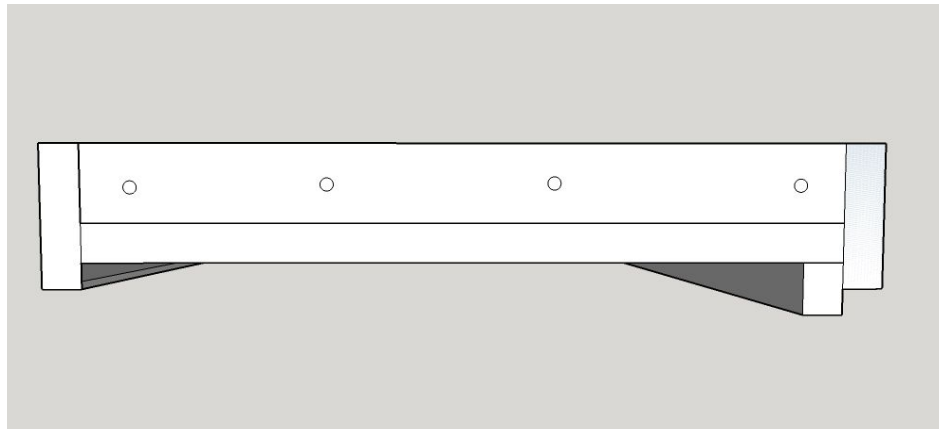


Figure 2-2

2-5 Attach the Header Stop to the underside of the Header toward the front. Pre-drill holes using 1/8" bit about every 8-10". Use a countersink so that the screw will be slightly recessed when inserted. Attach with 1 1/2" screws.

Your header is now complete!



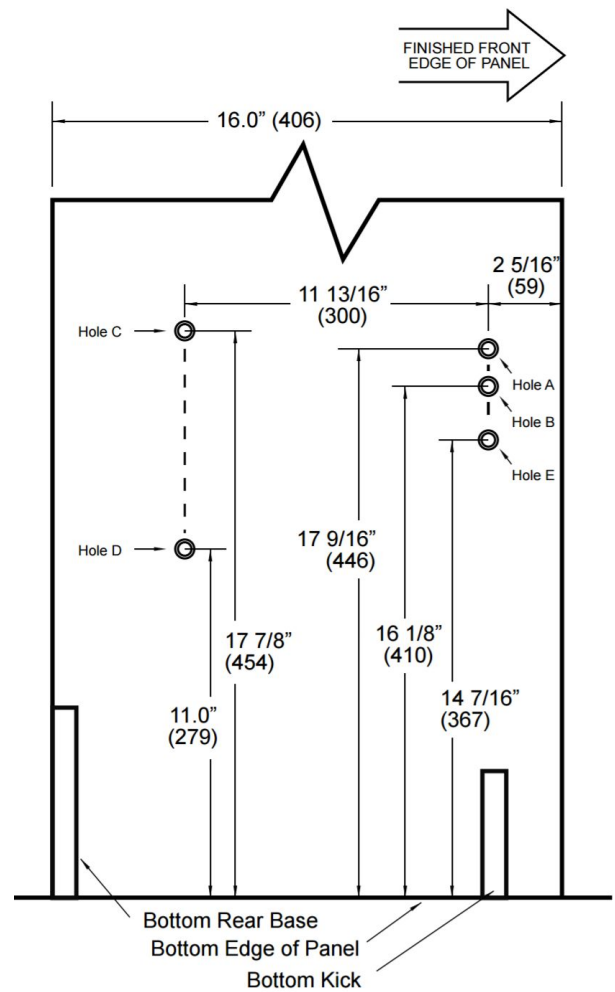
## Step 3: Verticals

3-1. Exactly mark the mounting holes on the inside of each side panel. (NOTE: the 11 13/16" measurement is in addition to the 2 5/16")

3-2. Drill a 1/16" (2mm) pilot hole for each mounting bolt. Drill the final hole with a 5/16" (8mm) bit.

3-3. Counter sink 5/8" (15mm) on the outside of the panels just deep enough for the 5/16" x 1 1/4" (8x32mm) Machine Screws.

*Do not mount the mechanism until after you've applied the finish.*



### Tip: Cut out for your base molding:

On the back lower corner of the verticals a cut can be made to accommodate existing base molding so cabinet can fit flush against the wall. This will keep you from having to remove the base molding on the wall.



## Step 4: Finish the parts

You should now have:

- 2 to 4 - (A) Bed Face Panels (depending on size)
- 2-(B) Verticals
- The Top Panel/Header built in step 3 | from parts:
  - (D) Top Panel
  - 2-(E) Top Facia
  - (H) Header Cleats
  - (I) Header Stop
- (C) Headboard
- (F) Bottom Rear Base
- (G) Bottom Kick

It is best to finish both sides. You can paint the parts or stain them. Minwax.com has great tips on finishing project. You can get some help there finding the product and how to apply the finish. See [www.minwax.com](http://www.minwax.com)

# Installing The Springs

Video: [Adding Springs](#)

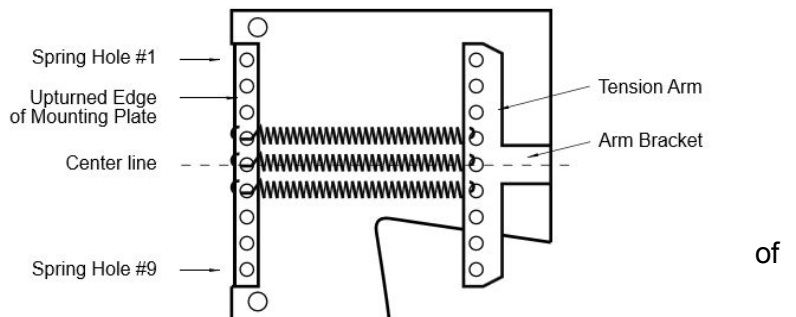
*NOTE: Some models may have the correct number of springs already installed. Check the chart and if your bed already has them installed then skip this section.*

1-1. The Number of springs in the Lift Mechanism will vary by size and application of the Murphy Bed. Check chart below.

<b>SPRING APPLICATION CHART</b>		
Please Note: These are recommendations only. Actual number of springs required will depend on the total weight of the bed face unit including the mattress and all bedding		
<b>BED SIZE</b>	<b>STANDARD FACE (NO DESK)</b>	<b>STANDARD FACE (ADDED DESK)</b>
<b>Single/Twin</b>	4 Springs Vertical (3 Horizontal)	5 Springs Vertical (4 Horizontal)
<b>Double/Full</b>	5 Springs Vertical (4 Horizontal)	6 Springs Vertical (5 Horizontal)
<b>Queen</b>	6 Springs Vertical (5 Horizontal)	7 Springs Vertical (6 Horizontal)
<b>King</b>	8 Springs Vertical	9 Springs Vertical
After you have completed installing and checking the operation of your bed, you may find it necessary to add or remove springs to achieve the correct lift effort of between 5 to 10 pounds.		

1-2. There are nine locations for springs. If the bed requires an even number of springs, do not use the center hole (#5 from the top). If the bed requires an odd number of springs, start with the center hole (#5 from the top) and work outward in both directions evenly.

1-3. Hook the springs so the open ends are facing outward. You may have to gently pry up the tension arm and slide the spring under and snap them into place in the proper hole, matching the same numbered hole from the top of the mechanism back plate. You should have an equal number of springs on each side the center hole.



1-3. Repeat for the other Lift Mechanism.

*Use the same number of springs and the same layout on both Mechanisms*

# Mounting Lift Mechanism

**Video:** [Mounting the Lift Mechanism](#)

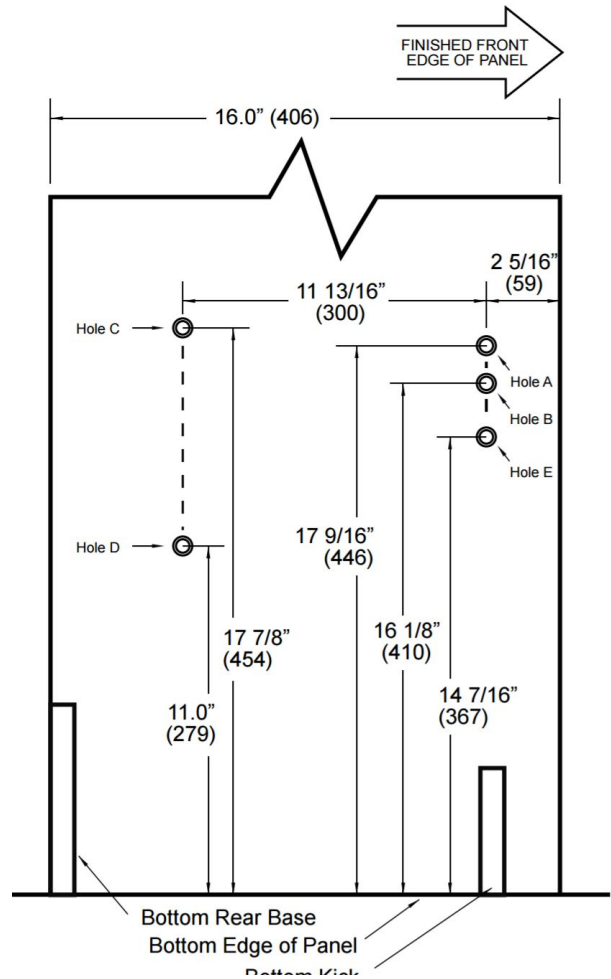
*NOTE: Some models may have the Lift Mechanism already mounted to the verticals. If this is the case with your Murphy bed then you can skip this section.*

2-1. The left and right Lift Mechanism hole pattern will line up with the hole pattern on the Side Panels (B). The bolts will be fed through the side that has the counter sink holes drilled.

2-2 Hole A will not have a standard nut. It is either a threaded hole or it will use a disk like bolt "Arm Lock Stop". Get Hole A started.

2-3 Insert the bolt in the other holes and loosely tighten onto the nuts.

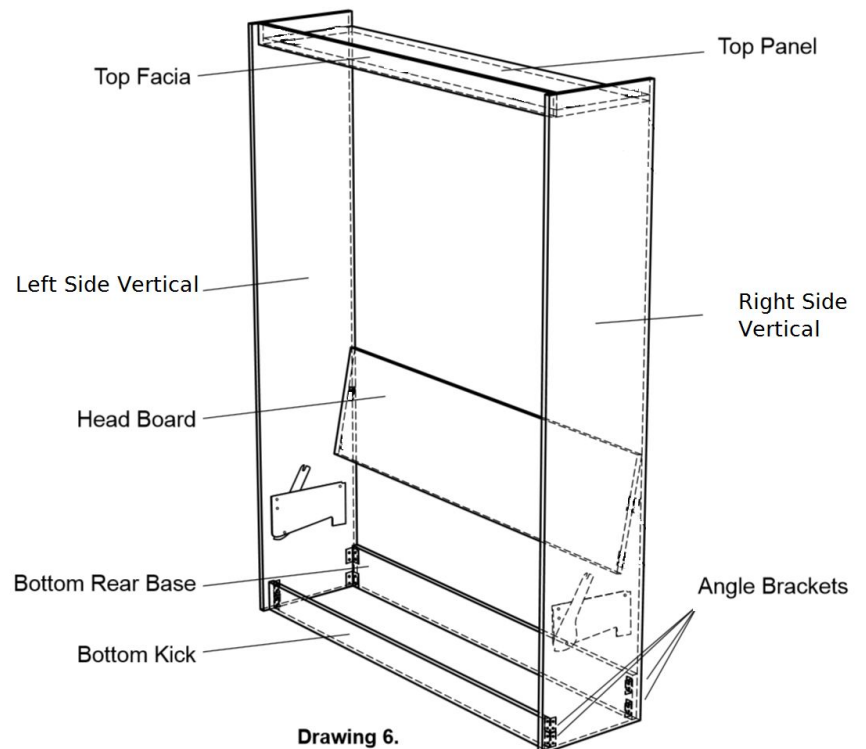
2-4. Once all Bolts and Nuts have been started tighten all of them.



# Assemble the Bed Cabinet

**Video:** [The Cabinet Part 1](#)

- If possible, the Bed Cabinet should be assembled in the room where it will be used.
- Be sure Lift Mechanisms are securely installed.



**Drawing 6.**

## Step 5 Headboard and Top Panel Installation

**On a soft surface like a blanket lay out the verticals.**

5-1. Add two brackets to each end of the headboard. 1 x 1 x 1 3/4" are shown but other sizes can be used.

5-2. Lay the verticals in the floor with the mechanism facing up and the foot of the bed toward the wall.

5-3. Place a mark each the vertical to locate the bottom corner of the headboard position. See drawing (20" from bottom and 3" from back).

5-4. Secure headboard to the verticals through the brackets with 3/4" screws. Lower part of the headboard should be on the mark made in step 5-3, and the top should be flush with the back.

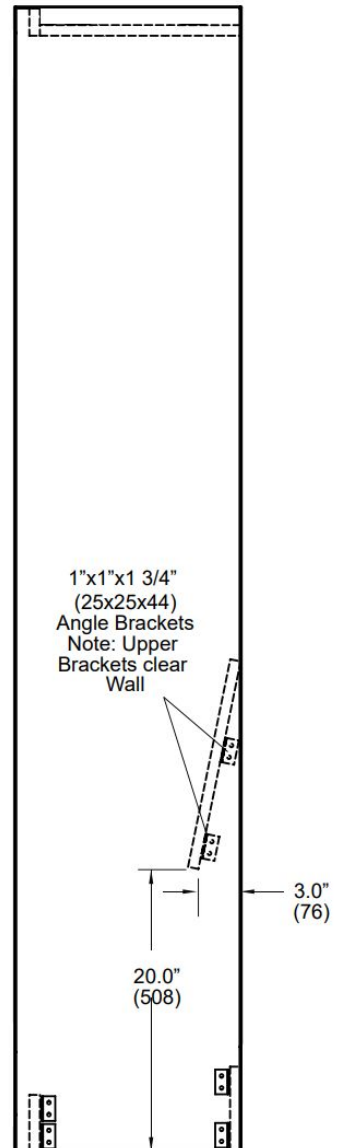
5-5. Carefully rotate the headboard and the one vertical so that the other end of the headboard/dowels can be inserted into the second vertical. The unit should now be face down.

5-6. Secure this other end of the headboard to the verticals with 3/4" screws

### Top Panel

5-7. With the bed still face down on the floor attach the top panel. Top panel should be flush with the top of the verticals and the front.

5-8. Secure each side with five 1-1/2" screws.





## STOP IF YOU HAVE LIGHTS

### Video: [Lights](#)

If you have lights, you will want to make sure your wiring and control box is in place.

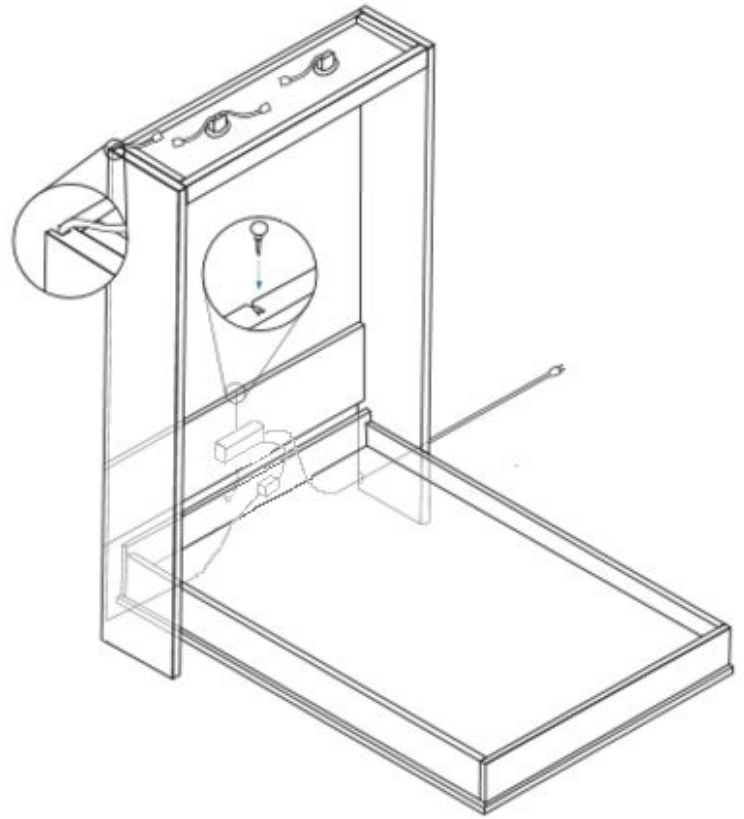
L-1 Mount control box to the back of the headboard using 1-½” screws. Mount this centered and toward the bottom of the headboard.

L-2. Mount the Touch Plate to the top/back of the headboard, centered, using a ¾” screw.

**Note: drawing shows a knob instead of a plate. We now use a touch plate.**

L-3. Run the single wire from the control box with Eyelet to the Touch Plate, and connect it with a ¾” screw.

**NOTE: If you have Outset lights there will be an extra single wire connected to the back of the Touch Plate. This wire will be be routed to the second Touch Plate Location. If there are no bookcases the location will be on the side of the murphy bed. If you have bookcases, the second Touch Plate location will vary depending on the type of bookcase you have.**



L-4. Plug the control box into a wall outlet.

L-5. Plug the female wire coming out of the control box into the extension cord.

**NOTE: With lights on the inside there will be a small control box inline on the extension cord. The small control box will be attached to the frame later. If your lights on Outset (designed to overhang on the outside of the cabinet, you will have a standard light duty extension cord.**

L-6. Plug the other side of the extension cord into the lights.

L-7. With a hammer, carefully tap the extension into the groove on the back side of the Side Panels. Lay the cord flat in the groove without any twist.

**NOTE: Some pre-installed models may already have the cord installed in the groove.**

## BACK TO REGULAR INSTRUCTIONS

Video: [Cabinet part 2](#)

**Stand the unit up and into its approximate place in the room. Check that the cutout made to clear your base molding is sufficient. If not make the height it needs to be. Lay the unit back down on the face, and adjust the cutout.**

### Bottom Rear Base and Bottom Kick

*Bottom Rear Base and Bottom Kick will be the same width (4") Some drawings may show them different sizes.*

*If you have added base molding is base molding may be attached to the Front Bottom Kick as in this example*

5-9 Prep the Bottom Rear Base and Bottom Kick by adding 2 brackets on each end.

**(NOTE: Some models this step may be done for you or you may see where the brackets were once put on)**

Lay both Bottom Rear Base and Bottom Kick face down on a clean soft surface. Flush the two brackets on each end (about  $\frac{1}{2}$ "- $\frac{3}{4}$ " from the top and bottom edge). Secure with  $\frac{3}{4}$ " screws.

**(NOTE: Face will be the best side. If you can not tell which side is the best then it will not matter.)**

5-10. Attach the Bottom Rear Base. Both the Bottom Rear Base and Bottom Kick will be the same height. You may want to use the better one for the front Bottom Kick. With the brackets facing toward the front, bring the Bottom Rear Base into so that it clears any cutouts that were made for the base molding

5-11. Attach the Bottom Kick by setting it back 1" from the front of the Side Panels. These brackets will face the wall/inside. Secure with  $\frac{3}{4}$ " screws.



**Special application: If you have added base molding, the Bottom Kick may be attached to that base molding and may not have the 1" set back. Also in some cases the Bottom Kick will be replaced by added base molding.**

**NOTE: The small control box will be just sitting there and will be attached to the frame later.**

# Attach Bed Cabinet Securely to Wall

Video: [Attaching to wall](#)

## 6-1: Find Studs

Prior to placing the cabinet against the wall, locate 3 studs (you may only find 2 on a twin size) or other wall frame members at the level of the Top Panel (top of bed). Alert: The cabinet must be secured to studs or other wall structural members or injury and damage could occur. If the wall is not a wood stud wall, use metal stud screws, toggle bolts or concrete expansion bolts if necessary.

Tip: for help finding studs there are several websites of video available online, just do a google search. One example: <https://www.lowes.com/n/how-to/how-to-find-studs-in-walls>

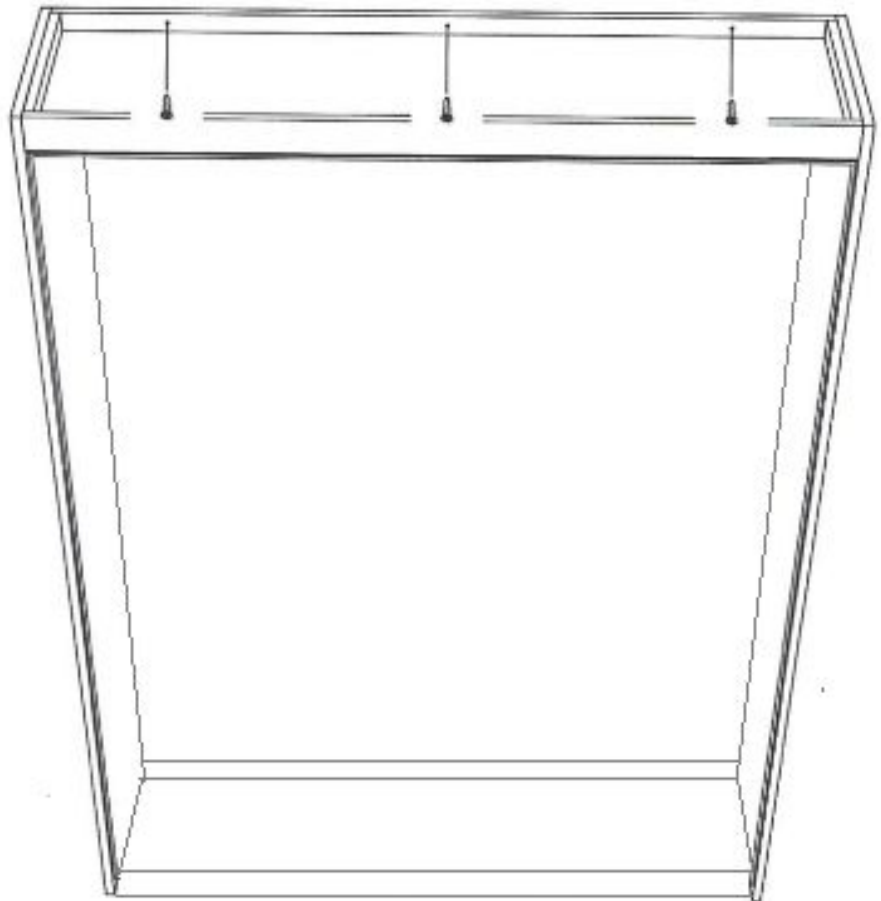
## 6-2 Attach to wall

Now that the cabinet is square and plumb, **pre-drill a hole in that backboard of the Top Panel/header at the stud location using a 3/16" drill bit. Fasten to wall using 3" screws. Repeat this for two other stud locations.**

If the wall is **CONCRETE, MORTAR OR BRICK**

Construction, use masonry screws:

Drill three pilot holes through the rear rail of the bed header into the wall for a twin or full and four for a queen size bed. Using a 5/32" concrete drill bit, drill through the pilot holes into the wall 2" deep. Anchor the bed by screwing 3/16 x 2 1/4" masonry screw through the rear rail of the bed header into the wall.



# Assemble the Face

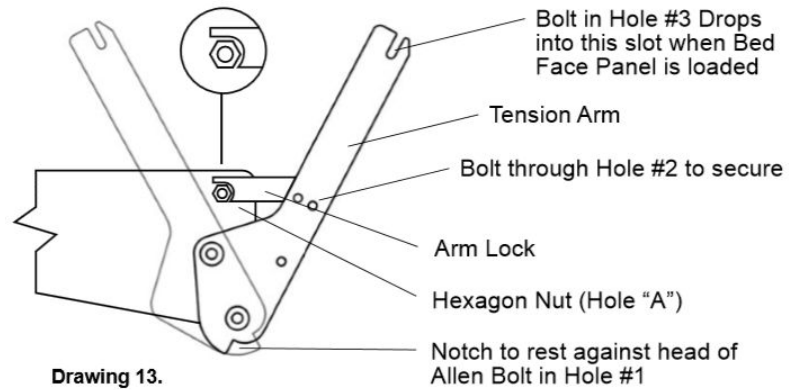
Lock the arm into place

**Videos:** [Locking Spring](#) and [Frame Bolts and Straps](#)

*Caution: If possible have a helper assist in the setting of the mechanism and loading of the bed face panel. DO NOT reach behind the tension arm when you are doing the setting procedure. To avoid reaching behind the Tension Arm, use a pencil or screw driver to move the Arm Lock into place.*

Holding one foot against the bottom front edge of the side panel and using the “Tension Arm Lever Tool”, pull the tension arm out until you can set the arm lock to the hex nut at the hole A (see drawing 13.). This is the hex nut at the top front corner of the mechanism.

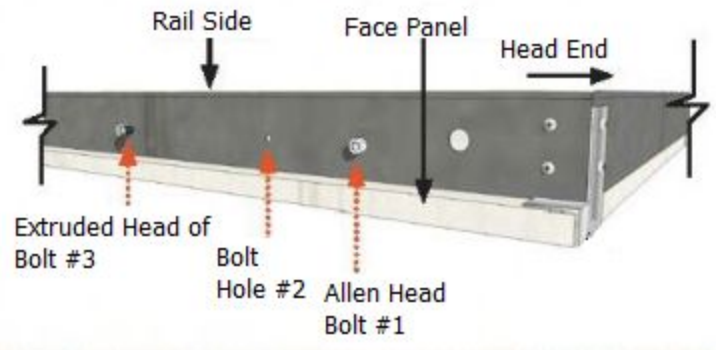
**Tip: If you set the “Arm Lock” on top of the bolt before you pull the Tension Arm back it will fall into place. Do not put your fingers back there to while pulling it back!**



7-1: Insert a Allen Head Bolts through Hole #1 (This hole should be the one about 6 3/4" from the end of side frame) on both left and right side frames (see Drawing).

**NOTE: On some Models this Allen Head Bolt may already be installed.**

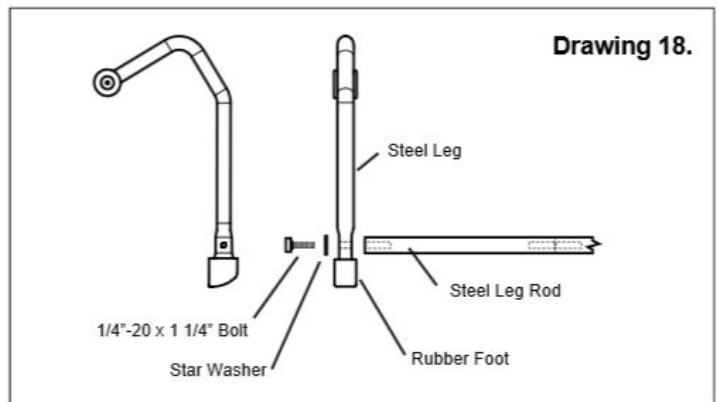
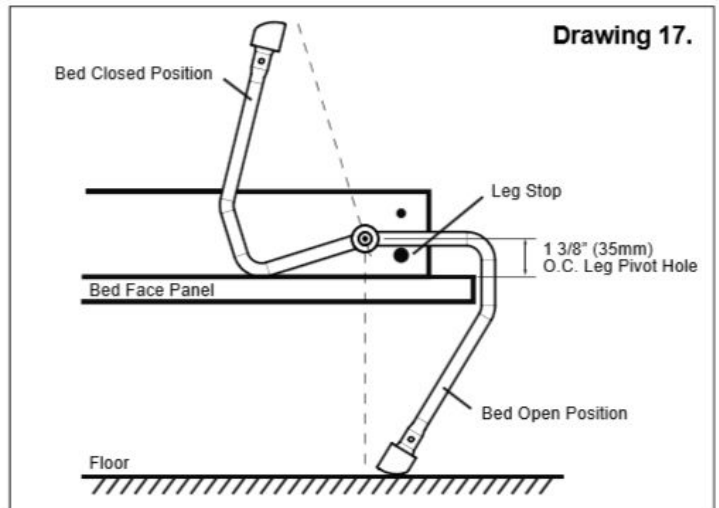
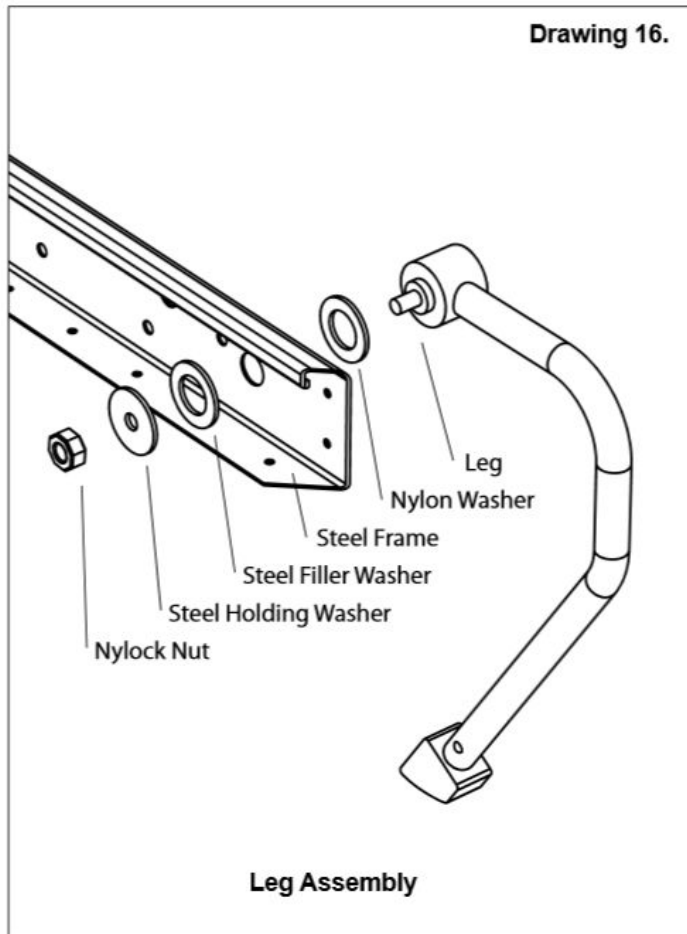
7-2 On each side, install 5/16" (M8x20mm) Hex Head Bolts from the outside of the frame through Hole #3. Only thread the nut until it is flush with the Nut end. Do not tighten.



# Install Legs

Video: [Legs](#)

8-1 Install legs with the washers on the inside of the Rails and the Nylon washer on the outside. Tighten nut to have a small amount of friction when leg assembly is rotated from the up to the down position.

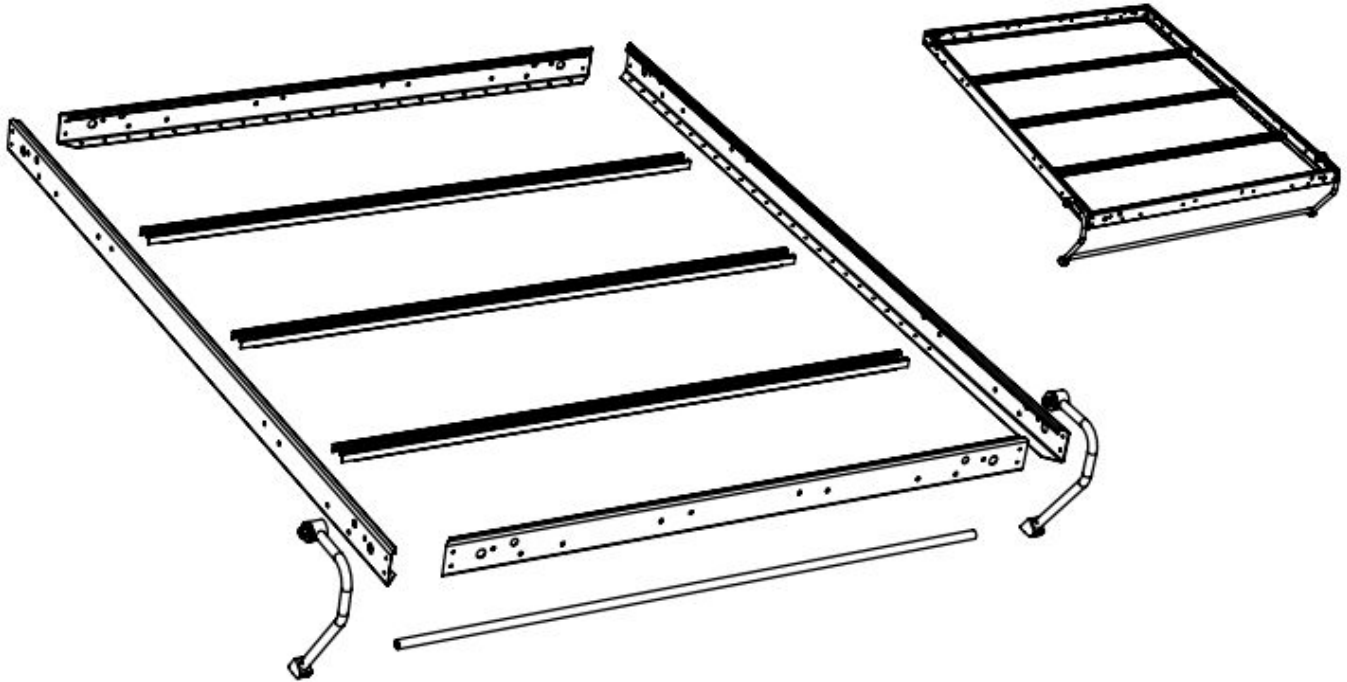


8-2 Install leg connector rod between legs and secure with 1/4"x1 1/4" (M4x32mm) Hex head bolts and star washers. Be sure they are securely tightened so not to become loose.

## Install the Bed Face Panel Unit

Video: [Face Part 1](#)

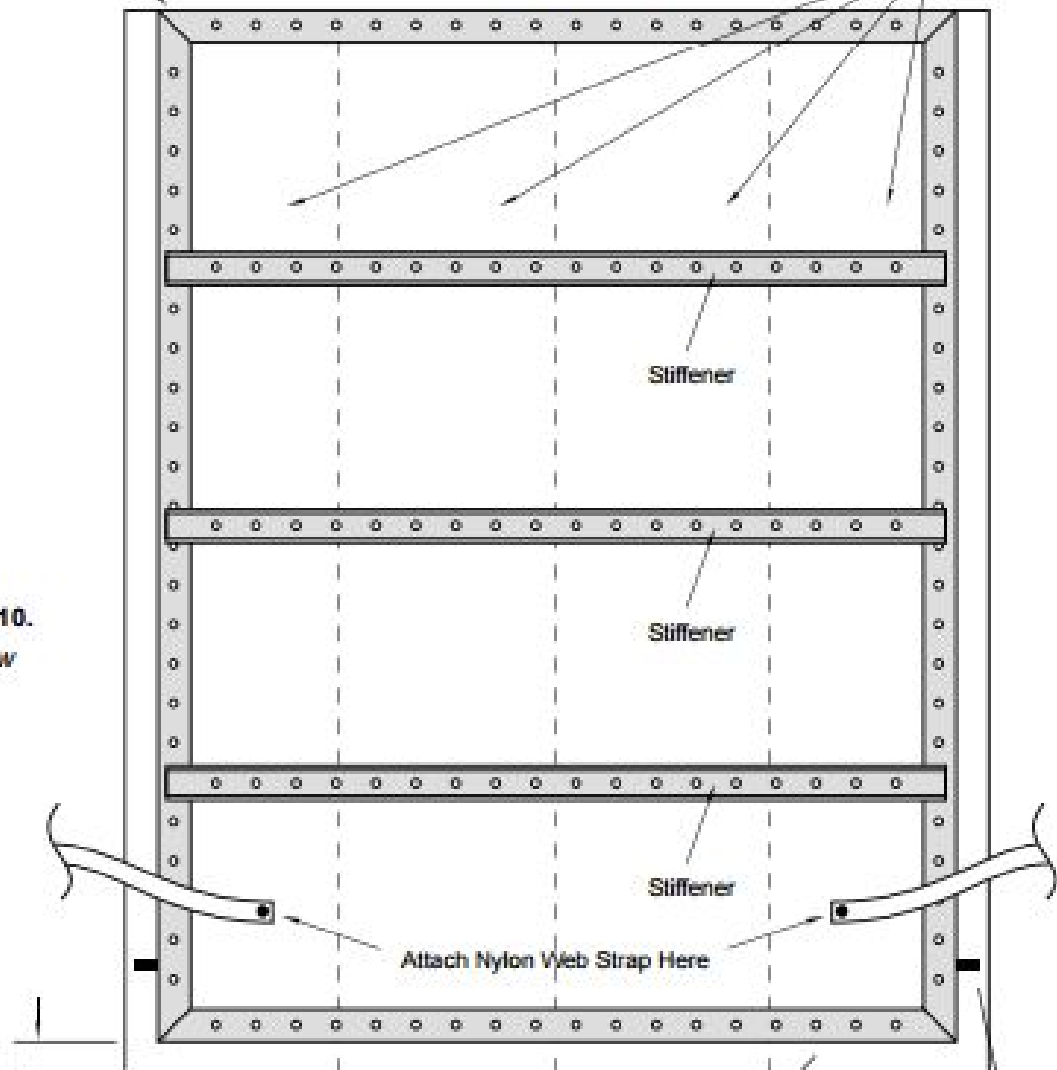
**Frame laid out for assembly in the Vertical orientation.**



Frame flush with end of Face Panels

Bed Face Panels

Head of Bed



Stiffener

Stiffener

Stiffener

Attach Nylon Web Strap Here

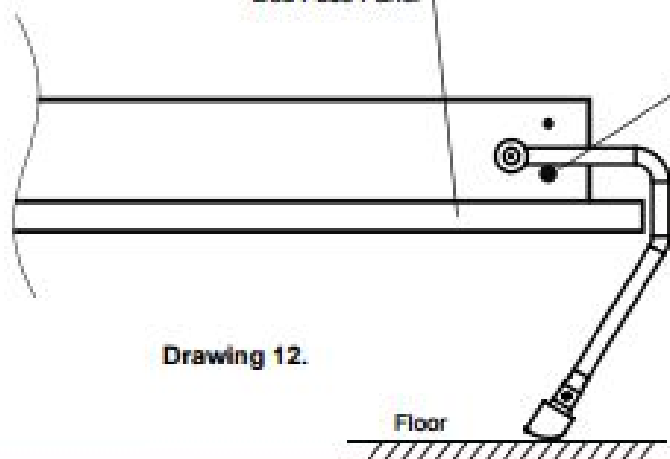
Foot of Bed

1.0" (25)

1.0" (25)

Bed Face Panel

Leg Stop



Side View (do not install legs at this time, it is shown for reference only)

Drawing 12.

Floor

Drawing 10.  
Plan View



F-1 Lay the Bed Face Panels down on a non-scratch surface such as a carpet or blanket. Make sure they the better side is face down and banded edges facing out and toward the foot of the bed. The foot of the bed will be away from the assembled cabinet.

*(Note: both sides are finished but there usually is a better side. Better should be facing down. Also there may be edges that are raw with the plywood exposed. Make sure all these edge are on the inside and down.*

F-2 Lay out the Steep Frame parts on top of the Face Panel. The longer pieces will be the sides and shorter will be the foot. There are two larger brackets called Panel Savers, they will go toward the head of the bed (side closest to the assembled cabinet)

F-3 Using Card #3 for the hardware. Start at the head of the bed. Align the Panel Saver with the screw holes in the side rail. Connect the head rail to the side rail using the corner brackets and the 3/16"x1/2" (M5x12mm) black screws and Nylock Hexigon Nuts provided. You'll use a 5/16 wrench (socket or nut driver can also be used) along with a drill to tighten. *(Assemble this section right on top of the face panels).* Refer to Drawing 12 to properly place

F-4 Foot side will be slightly different. Add the bracket to the side rail, but this time the bottom screw hole will use a 1-1/4" long screw and a Leg Stop. Refer to drawing 10 and 12.

F-5 Attach the bracketed side rail to the foot rail with the 3/16"x1/2" (M5x12mm) black screws and Nylock Hexagon Nuts provided.

### **Attaching the Frame to to the Face**

**Video:** [Face Part 2](#)

*In this step you'll need Screw Pack #7, Tape Measure, a drill with Phillips bit or a #2 square drive. We have found the #2 square drive works best.*

F-5: Start at the head of the bed (End closest to the assembled cabinet). The frame should be flush with the bottom and there should be a 1" overhang on the side. The Panel Saver can be used a guide. Put the first screw in the hole closest to the corner. Put a second screw in furthest hole in that first panel. For now only put the two screws in each panel. Continue putting two screws in each panel.

F-6 At the foot of the bed the spacing should be 1" as it was at the foot of the bed. Make sure all gaps are closed up between the panels and measure the side. It should be approximately 1". If not divide the difference and put a screw in the first corner. Continue putting only two screws in each panel.

F-7 Set the 3 Stiffeners into their approximately place. The first should be about midway from the top. The other two should subdivided that, so that all three are equally spaced. (Note for a king there will be 5 Stiffeners. Equally space them inside the frame)

F-8 Measure the halfway point in between the frame and screw down that center stiffener on the one side.

F-9 Measure from the end to the Middle Stiffener and divide by 2 and attach the other two Stiffeners. With those same measurements attach the other end of the stiffeners.

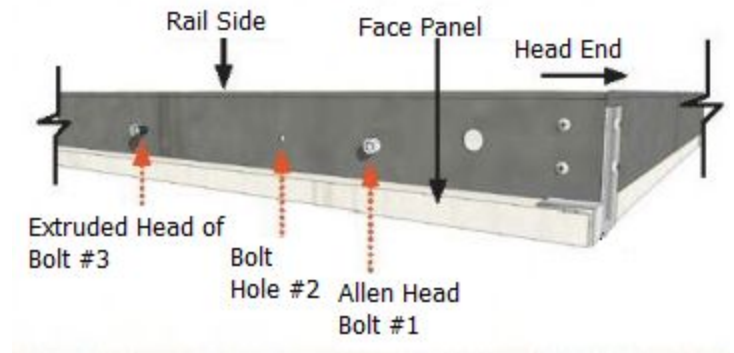
F-10 Finish putting in the rest of the screws in both the frame and stiffeners.



## Frame Bolts and Straps

Three holes used in the frame starting at the head end.

Hole #1. Starting with Hole #1 inset the Allen Head bolt and secure it with a Nylock Nut on the inside. Use the Allen wrench provided and a ½” wrench or socket to tighten.



Hole #2. For now skip hole #2. This will be used to secure the bed to the spring are in a later step;

Hole #3. From the outside inset a 5/16” Hex Head Bolt. Get. Only thread the Nylock nut but don't tighten yet.

Repeat the for the other side.

### Mattress Straps

Some customers will skip this step as the leg, when folded around, does a great job of securing the mattress.

Remove the screw that is in the bed right above the Stiffener, closest to the foot of the bed. Add a washer to the screw and screw down the doubled up end of the strap. Repeat for the other side making sure the strap is not twisted. (see [video](#))

## Mounting the Legs

**Video:** [Legs](#)

You'll need Hardware Pack 4, ½” wrench or socket, 7/16” wrench.

L-1 Note the order of washers. This is very important. Start with a Nylon Washer and put it on the leg.

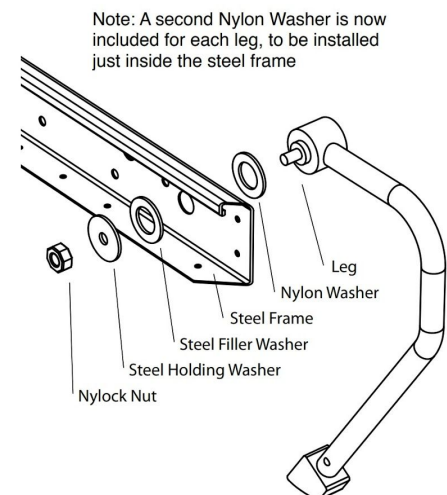
(NOTE: A second Nylon Washer on the inside is not shown in the diagram.)

L-2 Put the leg through the hole toward the foot of the bed.

L-3 From the inside add a second Nylon Washer (not shown in picture), Still Filler Washer, Steel Holding Washer, and then the Nylock Nut.

L-4 With a ½” wrench or socket tighten the Nylock nut but not too tight. You will want the leg to move freely.

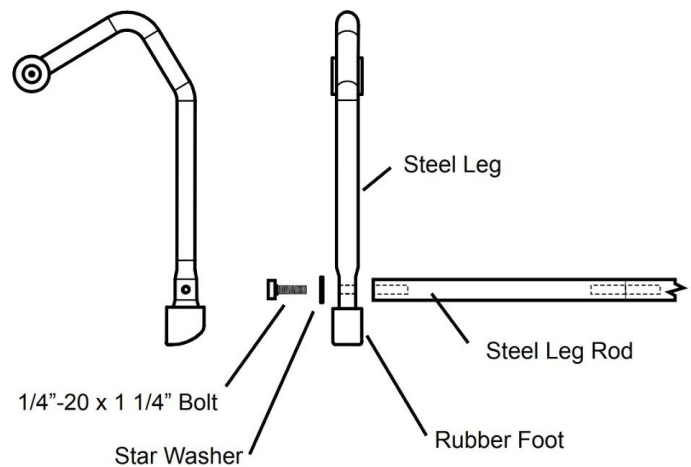
Repeat for the other side.



L-5 Attach the connector bar to the legs using the 1-1/4 bolts and star washer. See diagram.

L-6 Feed the 1 1/4" bolt with the star washer through the hole in the leg and into the Steel Leg Rod. Tighten with a 7/16" wrench or socket. Be careful not to over tighten. Repeat for the other side.

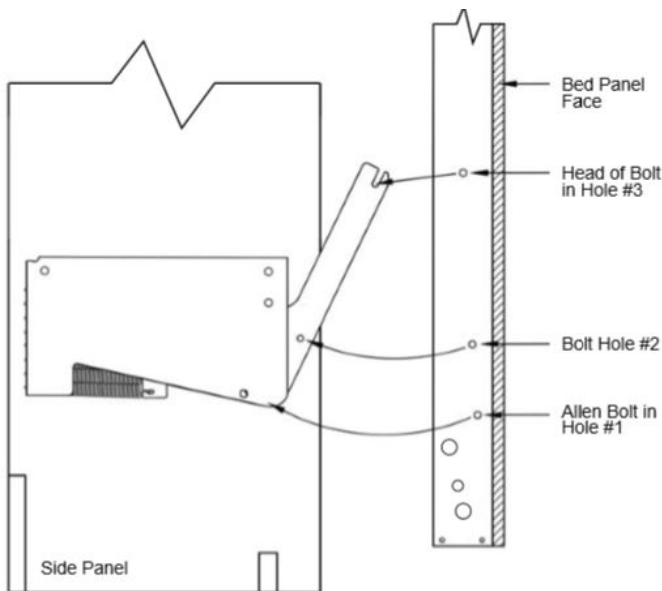
L-7 Check operation of the leg. Loosen or tighten the Nylock Nut from step L-4.



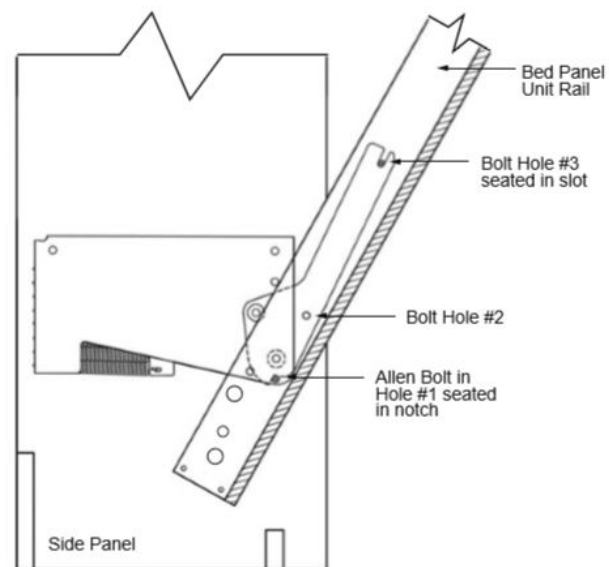
## Mounting the Face

Video: [Mounting the Face](#)

6-1. Lift the unit vertically to a height where the bolts in holes #3 are several inches above the top of the Tension Arms. Gently fit the unit between the arms, tilt it back approximately 10 degrees so that the head end of the unit clears the Bottom Kick, then lower it so that the #3 bolts slide into the slots at the end of the Arms. **Be sure the Allen Head cap seats at the bottom of the slots on the tension arm.** Slowly tilt the panel unit back just enough to allow the #1 Allen Head Cap bolts to be fully seated in the notches at the bottom of the Mechanism. As in Drawings 14, 15, and 16.



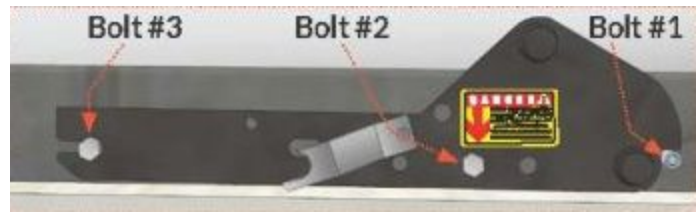
Drawing 14.



Drawing 15.

6-2 Continue to tilt the Bed Panel Unit outward to an angle of about 45 degrees, during which action you will hear a click as the Arm Locks disengage. With your assistant holding the bed at roughly this angle, install the #2 bolts and Nuts. Still holding the panel unit at this angle securely tighten the #2 and #3 nuts.

6-3 When all bolts are securely tightened, you may tilt the panel outward to approximately 45 degrees to release the arm locks. You will hear a click as they disengage.



**Caution:**

Hold the Face Panel securely, Do Not let it slam shut. Balance is not achieved until the mattress is loaded in the bed and will not stay down.

Holding the upper edge of the Bed Panel Unit, gently let the bed closed. If all is well, you should have even clearance between the side edges of the panel unit and the insides of the Side Panels.

If the Cabinet is not square and the Bed Panel Unit binds try the following adjustments.

- Nudge the Bed Cabinet along the floor, pushing from the base of the Side Panel
- Shim (or reshim the bottom of the Side Panels for floors that may be out of square.

## Plug in the Lights:

Mount the small control box to the back of the “Frame and face Panel”. Remove the tape backing and stick the control box to the back of the metal frame. **Make sure the arrow is facing up and toward the wall.**

## Complete Bed Assembly

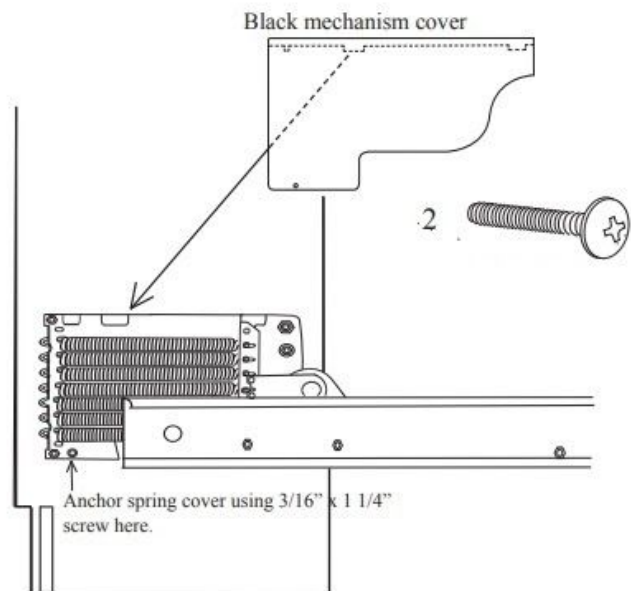
## Follow up to Initial Assembly

**Video:** [Finishing Up](#)

Check that the Bed Cabinet is level and square so the Bed Face has equal clearance of the Cabinet on both sides, top to bottom. If the Cabinet is leaning to one side, nudge it at the floor level. If the top is uneven, place shims under the Side Panels. If bed is too heavy to operate easily or slams shut, remove the Bed Face Panel and add or subtract springs. At this time, you may decide to use one more or less spring(s) on the left or right side Lift Mechanism.

### 7-1 Add Cover Plates

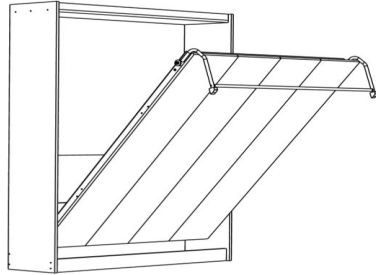
You should have a left and right cover plate and two 1-1/2” wood screws. The cover plates have tabs on them. Slide those tabs into the slot in the top of the mechanism.



Slip the Mechanism Cover over the Mechanism so that the tabs on the cover fit into the notches. Line up the hole with the barrel support and anchor in place using the 1-½” screw provided Repeat on the other Mechanism.

7-2 Strap the mattress into place.

7-3 Add any accessories like crown or bookcases.



Right Side  
Looking through Side Panel.