

# Folding Bench and Picnic Table Combo

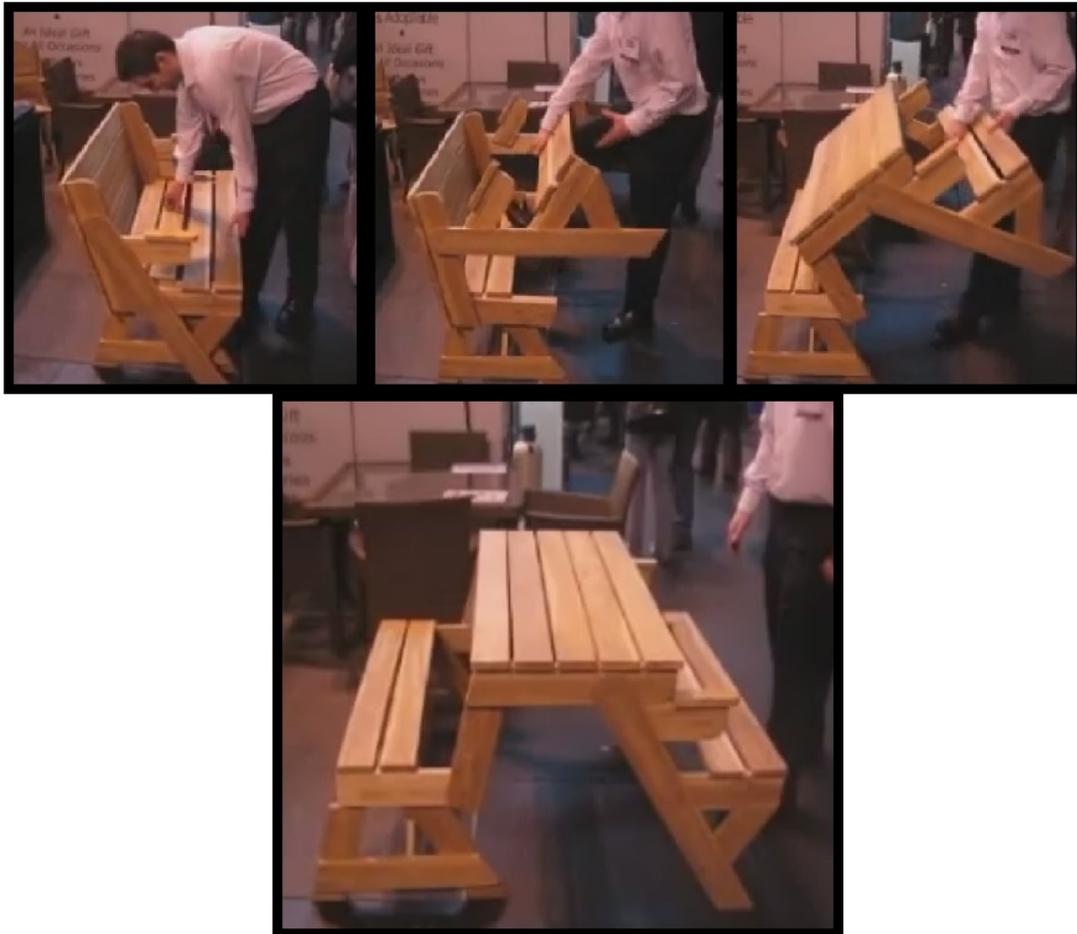
## Full Woodwork Plans

### Materials & Cut List



Ideal for those small spaces.  
Picnic table folds down to bench seat.  
Either a 2 1/2 seater bench seat (2 adult and a kid)  
Or.....  
a 5 seater picnic table

Front seat spans 1380 (54-3/8"); Rear seat spans 1245 (49"); Tabletop spans 1480 (58-1/4")



## Materials List.

Stock sizes are actual sizes.

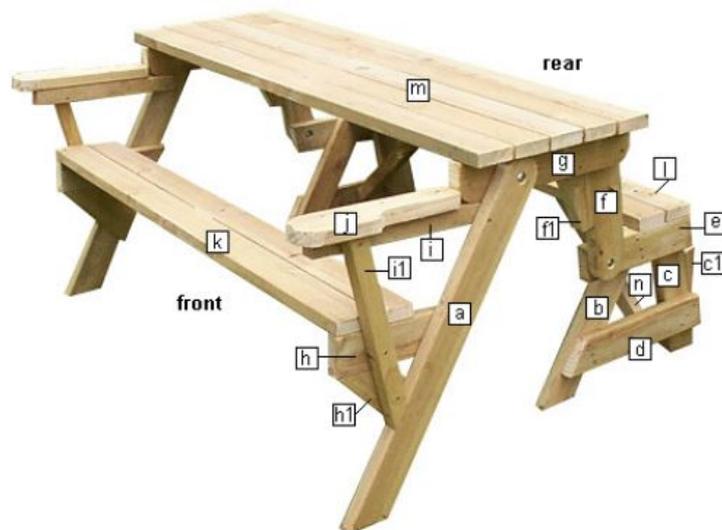
NOTE: Inquire at your local lumber store regarding the availability of the following lumber sizes. If different sizes are used, then slight adjustments will need to be made to the length of the bolts and also the length of the seat and tabletop members.

Stock Size/ Material	Amount
90x32 (1 1/4 x 3 1/2) Natural decay-resistant or treated lumber.	16m (53ft)
90x45 (1 1/2 x 3 1/2) Natural decay-resistant or treated lumber.	7m (23ft)
10mm (3/8") carriage bolts 70mm (2 3/4") long and self locking nuts	4 of
exterior type wood screws 50mm (2") long	100 of
exterior type wood screws 75mm (3") long	16 of
exterior wood glue	

## Tools you will need.

- Circular power saw
- Drop saw. Able to cut accurate angles
- Jig saw
- Electric drill
- Hammer, Hand saw, Measuring tape, pencil, square, screw driver, level
- 10mm (3/8") drill bit for bolt holes
- 3mm (1/8") drill bit for screw holes
- 22mm (7/8") drill bit to embed bolt heads (bit must be larger diameter than bolt head)

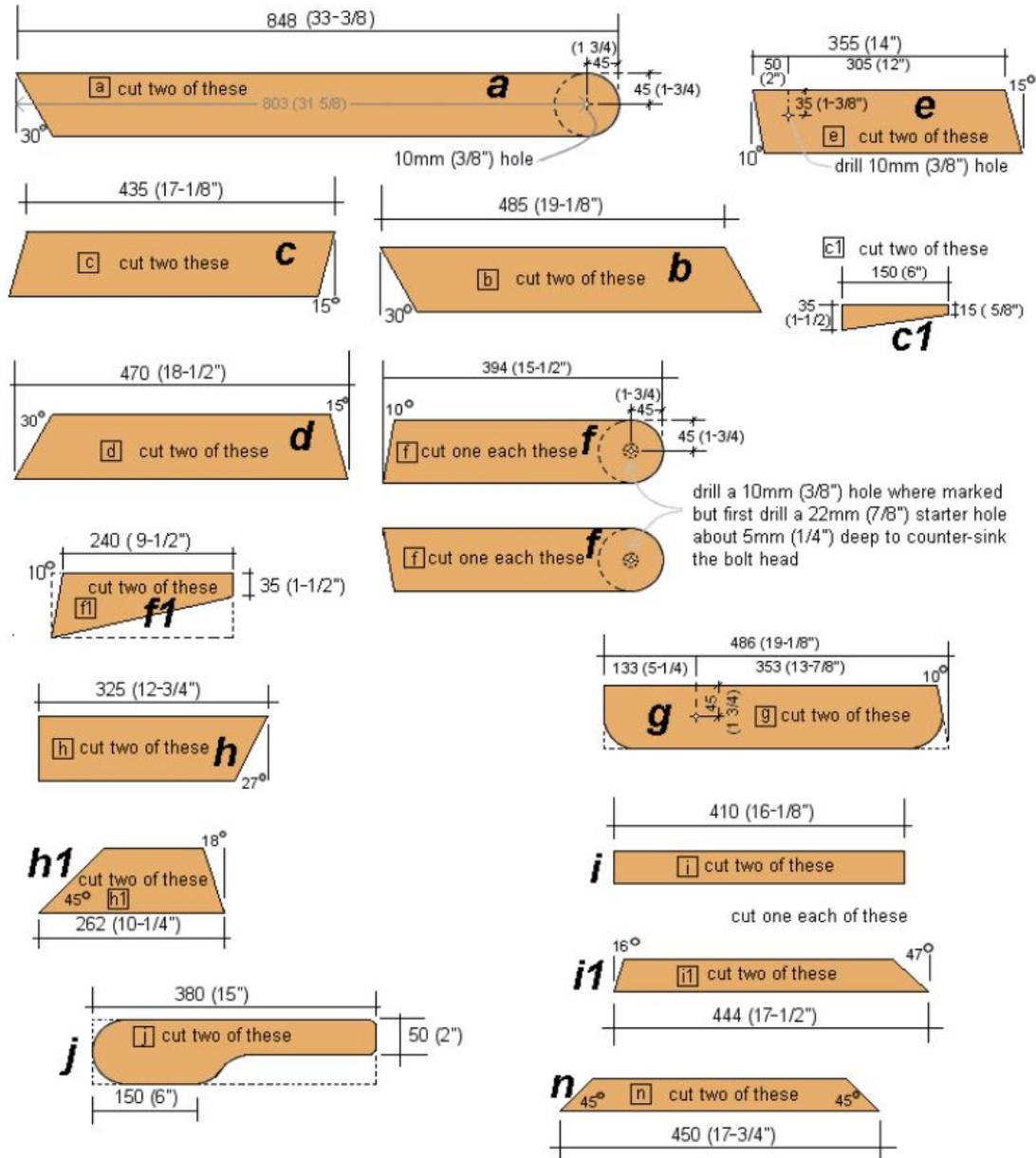
## Identifying the members



- [a] leg (long) table and front seat support
- [b] leg (short) inner, rear seat
- [c] leg (short) outer, rear seat
- [d] leg and brace support, lower horizontal member
- [e] leg and seat support, upper horizontal member
- [f] leg (short) rear of table
- [f1] addition to leg (short) rear of table
- [g] tabletop support, horizontal member

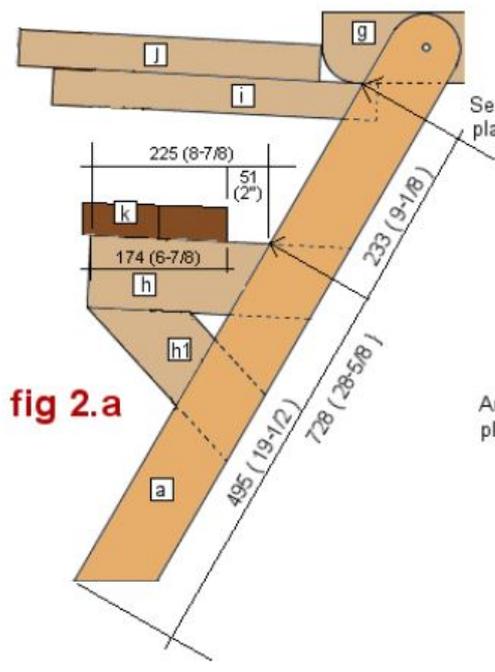
- [h] front seat support, horizontal member
- [h1] front seat support brace
- [i] arm support, horizontal member
- [i1] arm support brace
- [j] arm rest
- [k] front seat
- [l] rear seat
- [m] tabletop
- [n] rear seat brace

**fig 1 The members** cut from 90x32 (1 1/4 x 3 1/2) stock



**Also cut.....**

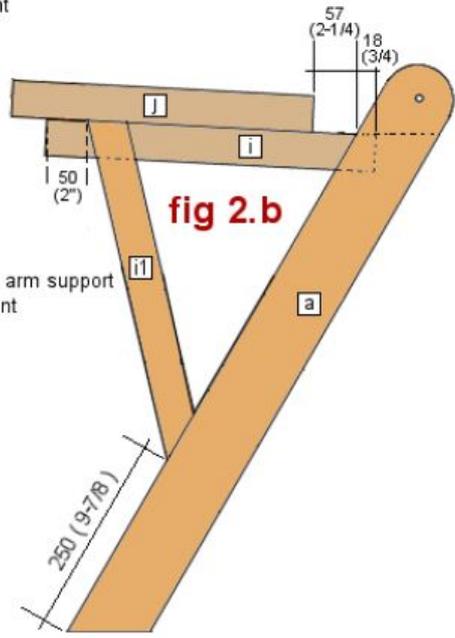
- m** 90x32 (1-1/4 x 3-1/2) stock 5 lengths at 1480 (58-1/4") long for tabletop m
- k** 90x45 (1-1/2 x 3-1/2) stock 2 lengths at 1380 (54-3/8") long for seat k
- l** 90x45 (1-1/2 x 3-1/2) stock 2 lengths at 1245 (49") long for seat l



**fig 2.a**

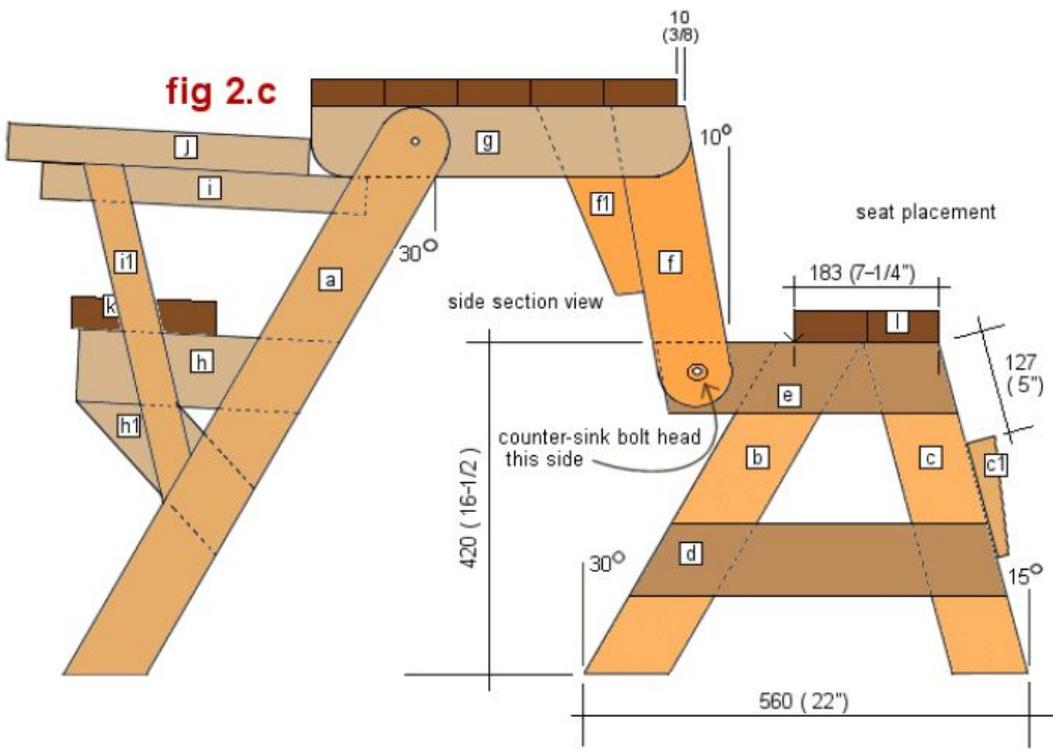
**fig 2**  
Some important measurements

Seat and seat support placement



**fig 2.b**

Arm and arm support placement



**fig 2.c**

seat placement

side section view

counter-sink bolt head  
this side

NOTE: These plans are in both metric and imperial. All measurements not in brackets are millimetres. ( All measurements in brackets are inches )

### Some important points

Some fairly accurate measuring, drilling and cutting is required for this folding table to work in the manner that it is meant to, however, due to Murphy's law, lumber sizes being different, and dare we say it, a slight error in measurements, the table might not work as smooth as it should so some precautions can be taken.

1. Pay special attention to the paragraph in **step 3** that say "Special care should be taken for the following....."
2. Member [c1] is a back stop. It stops the tabletop going down too far when the table is folded into bench seat mode. Because the placement of this member is important, it is advisable to temporary place it, ie hold it in place with only one screw until the folding motion has been tried. A slight adjustment may then be required.
3. The placement of seat [k] along support member [h] is also crucial. Study the dimensions shown in **fig 2.a**. Because the placement of this seat is important, it is advisable to temporary place it, ie hold it in place with only one screw each end of each member, until the folding motion has been tried. A slight adjustment may be required.



1.

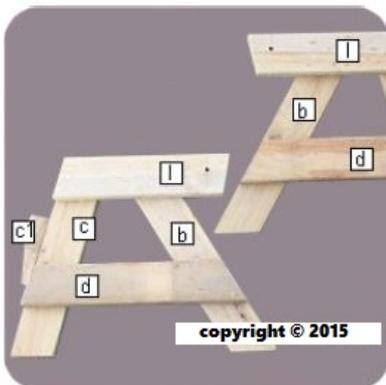
#### A bit about the lumber

All the lumber used is 90x32 (1-1/4 x 3-1/2) stock except the seat boards [k] and [l] which are 90x45 (1-1/2 x 3-1/2) stock.

If 90x32 (1-1/4 x 3-1/2) stock is unavailable in your area, and a different stock size is used, then adjustments will need to be made to the length of the bolts and the rear seat boards [ l ] and the tabletop boards [m].

#### Cut and drill all the members

Cut all the members to the length as shown in **fig 1** in the plans section. Mark the holes and curves. Pay particular attention as to the marking of the holes. Cut the curves and drill 10mm (3/8") where marked. In members [f] only first drill a 22mm (7/8") starter hole about 5mm (1/4") deep to counter-sink the bolt head. See **fig 1** in the plans section.



2.

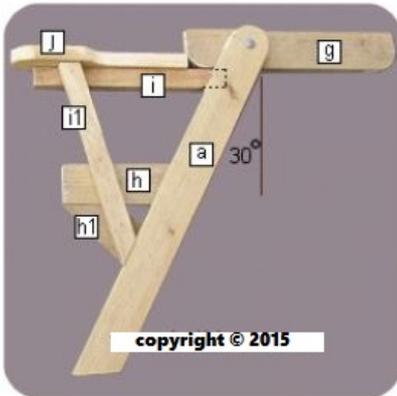
#### The rear seat side frames

Assemble both rear seat side frames. Make one as per the dimensions shown in **fig 2c** in the in the plans section.

Fix horizontal members [d] and [e] to members [b] and [c] with screws and exterior wood glue. Use 3 screws per meeting. Pre-drill the screw holes through the horizontal members.

Make up the second in the same way but as a **mirror image** of the first.

Ensure that the bottom of members [b] and [c] and the horizontal members [d] and [e] are all parallel to one another.



**3.**

**Front side frames**

Assemble the two front side frames. Make one as per the dimensions shown in **fig 2a** and **fig 2c** in the in the plans section. Make up the second in the same way but as a **mirror image** of the first.

Special care should be taken for the following.....

When member [a] is 30 degrees off right angles to member [g] (as in the picture) ensure that the arm support [i] is tucked up firmly under member [g] and also does not run past member [a] by more that 18mm (3/4"). See **fig 2a** in the in the plans section.

The end of the arm [j] should be touching member [g].

Fix together with screws and glue.



**4.**

**Complete the side frames**

The two complete side frames can now be assembled. This is simply a matter of fixing members [f] and [f1] to the tabletop support horizontal member [g] and also to member [e].

Make one complete side support unit to the dimensions shown in **fig 2c** in the plans section. Make up the second in the same way but as a mirror image of the first.

Take note of which side of member [f] the counter-sink hole for the bolt head goes.



**5.**

**Make the middle of the table and seats steadfast.**

The middle of the tabletop and the seats will need to be made steadfast (member fixed to member) to stop warping and creating an uneven tabletop or seat. One way of doing this is to drill a 10mm (3/8") hole width ways through the center of all the tabletop and seat members and by running a 10mm (3/8") threaded rod through all the holes. Nuts and washers can then be added to each end of each rod and tightened as needed. The nuts and washers will need to be counter-sunk into the lumber, any excess rod will need to be cut off with a hacksaw and packers or spacers will need to be placed between each member.

The packers or spacers can be either washers or thin strips of lumber with holes drilled in them. (see picture).



6.

**Add the table and seat members**

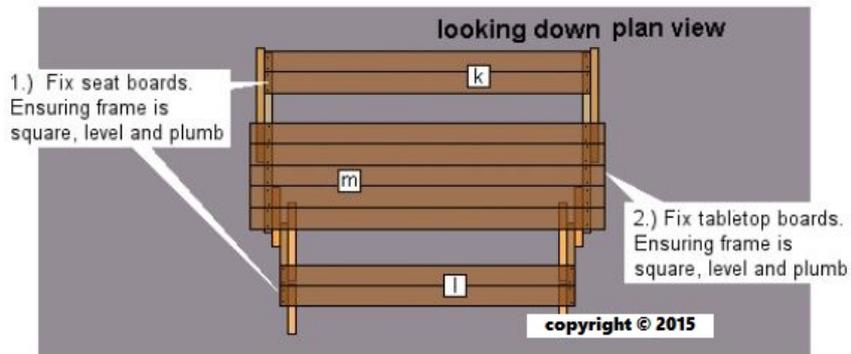
First fix the seat members [k] and [l] to the appropriate seat supports [k] and [l] ensuring frame is square, level and plumb.

The placement of the seats along support members is crucial. Study the dimensions shown in fig 2.a in the plan section.

Because the placement of this seat is important, it is advisable to hold it in place with only one screw each end of each member, until the folding motion has been tried as a slight adjustment may be required.

Next screw the tabletop in place. Ensure it starts 10mm (3/8") in from the rear of the tabletop support, horizontal member [g]. See fig 2.c in the plans section. Also ensure that the overhang at each end of the table side frames are equal.

All seat and tabletop members should be pre-drilled and screwed with two screws at each meeting.



7.

**Brace the rear seat**

Turn the table upside down and prop or sit the rear seat on something solid. Ensure that the seat side frame and the seat are at right angles to each other and fix the braces in place. Just like in the picture.

Flip the folding table up the right way and see how it works. Make any necessary adjustments as described in the paragraph at the end of the plan section.



All Done!

< **This**  
or **this** >

