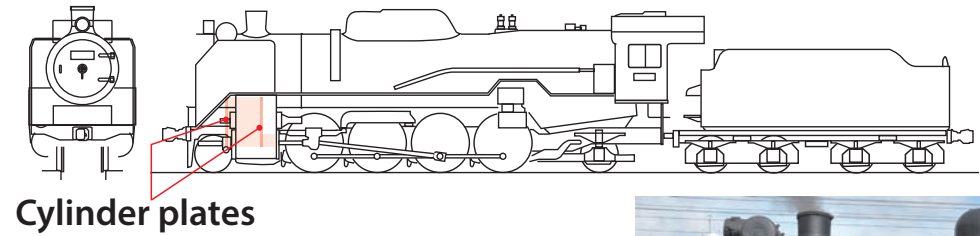
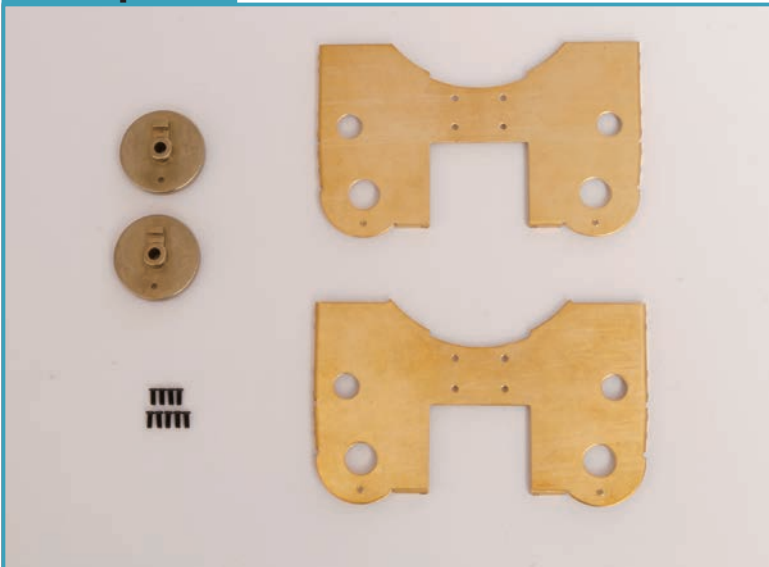


The front and rear cylinder plates



Your parts



Front cylinder plate
Rear cylinder plate
Rear cylinder covers × 2
M2 × 5mm screws × 9

Required Tools

Phillips screwdriver
Epoxy or contact adhesive

1

Identifying the parts

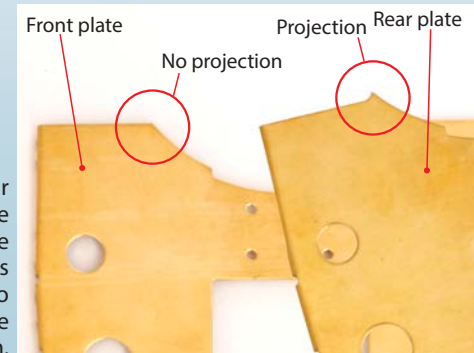


Position the main underframe assembly as shown.



Locate the four circled holes on the front and back of the smokebox support stand.

The front and rear cylinder plates are very similar. Locate the two circled points in the photo (right) to identify the difference between them.



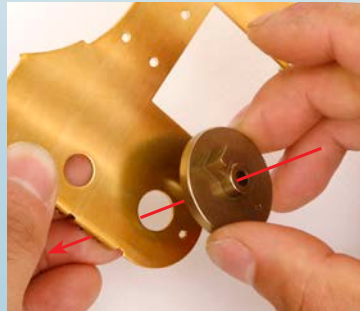
2

Fitting the cylinder covers



Back side of the cover (no square projection)

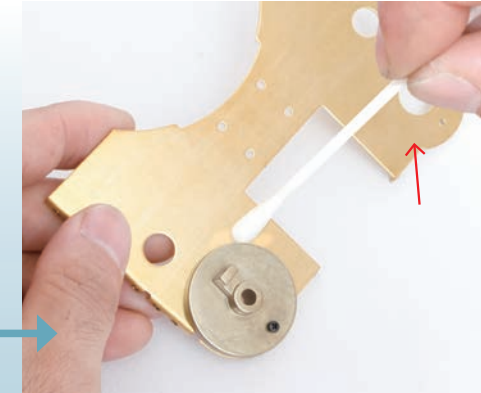
Thinly spread a small amount of contact adhesive or epoxy over the back of the cylinder cover.



Place the cylinder cover into the hole on the rear cylinder plate (arrowed).

Before the adhesive sets, align the hole of the cover with the hole of the plate (circled).

Temporarily hold the cover to the plate while the adhesive dries, using one of the screws as shown.



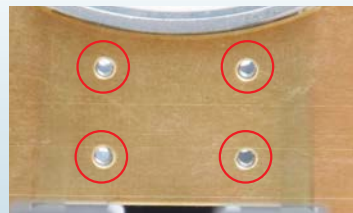
Wipe away any adhesive that has spread out from under the cover onto the plate. Remove the screw when the adhesive has dried, then repeat this step to fit the second cover into the hole on the other side of the plate (arrowed).

3

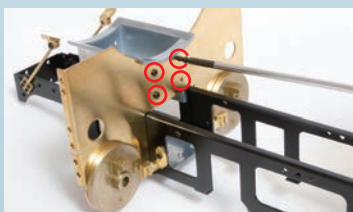
Fitting the cylinder plates



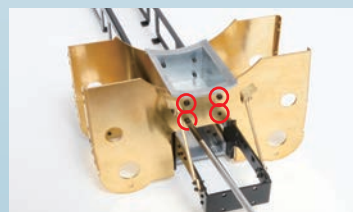
Place the rear plate onto the underframe, behind the smokebox support stand.



Align the four holes (circled) of the rear plate with those of the stand.

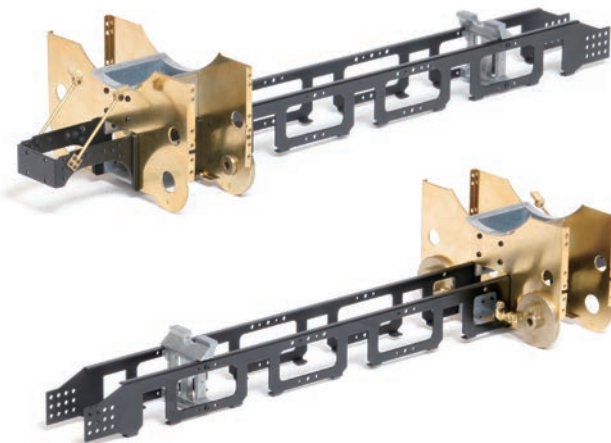


Secure the rear plate to the stand by tightening a screw into each of the holes.

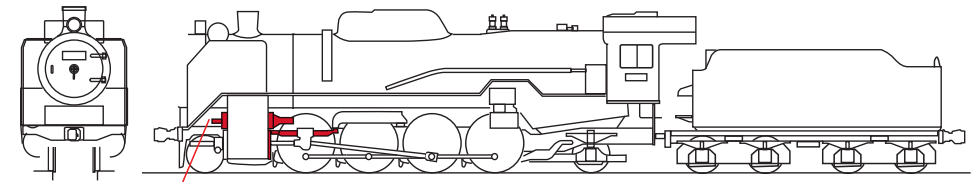


Fit the front plate in front of the stand, tightening a screw into each of the holes, as with the rear plate.

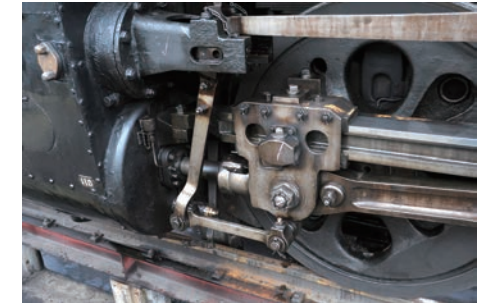
Assembled parts



The safety valves, motion bars, steam chest covers and valve tail guides



Steam chest covers and valve tail guides



Your parts



Front steam chest covers × 2
Piston valve tail guides × 2
Motion bars × 2
Cylinder safety valves × 2
M2 × 6mm screws × 3

Required Tools

Phillips screwdriver
File
Sandpaper
Epoxy adhesive
Cotton bud

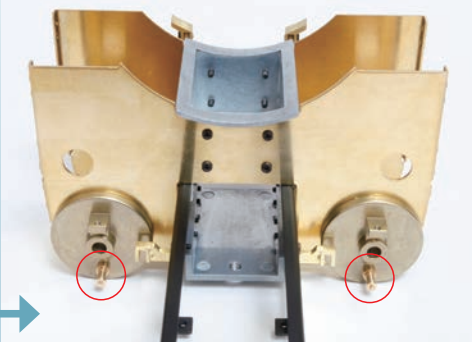
1

Fitting the cylinder safety valves



Make sure that you have removed the screws from the holes on the cylinder covers (circled).

Insert one of the cylinder safety valves into one of the covers, into the hole that the screw was placed in.



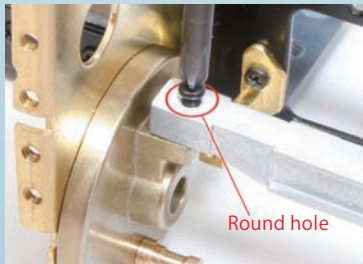
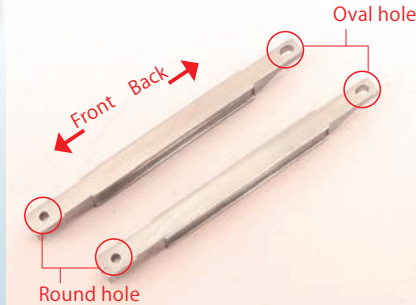
Insert the second safety valve into the hole in the cover on the other side of the rear plate.

2

Fitting the motion bars

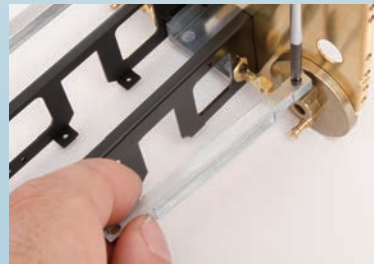


Check over the two motion bars for any burrs or flash left over from casting. Remove any you find with a file or sandpaper, and be careful not to alter the bars' shape when removing them.



Position the front end of one of the bars over the hole in the square projection of the cover, and loosely secure it in place with a screw.

Repeat this for the other cover.



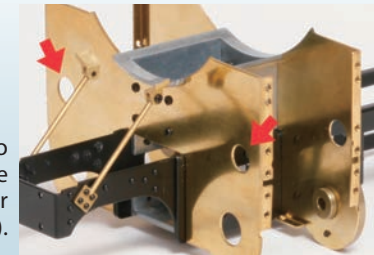
3

Fitting the steam chest covers



Apply a small amount of epoxy to the front steam chest covers, as shown.

Locate the two holes on the front cylinder plate (arrowed).



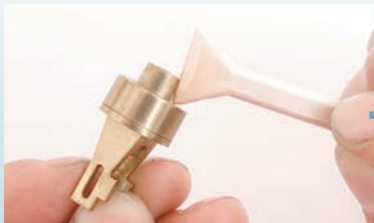
Insert the covers into the two holes identified, pressing firmly into place until the epoxy has dried enough to hold them without aid.

If any epoxy seeped out from between the plate and the covers, remove it with a cotton bud.

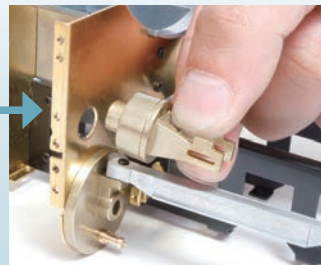


4

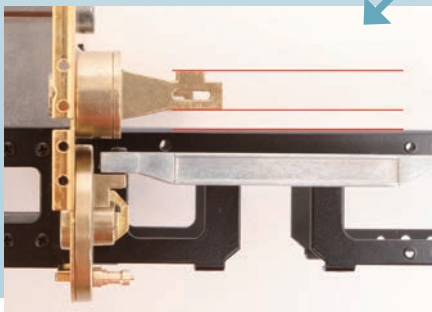
Fitting the piston valve tail guides



Apply epoxy to the back sides of the piston valve tail guides.

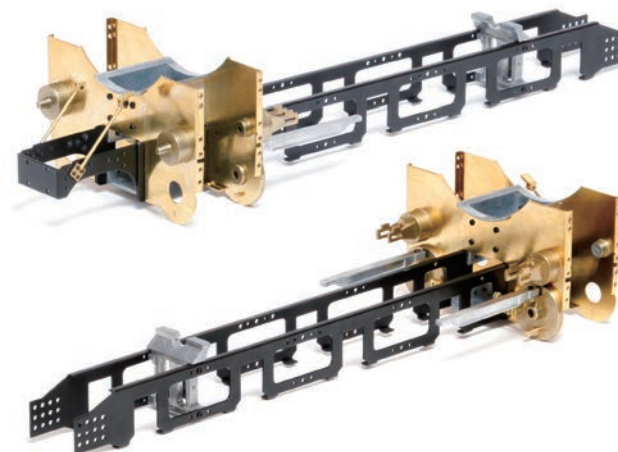


Insert the guides into the holes on the rear cylinder plate, above the covers.

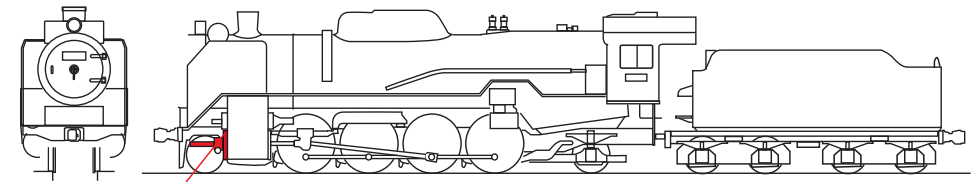


Before the glue dries, adjust the positions of the guides so they are parallel to the underframe (red lines).

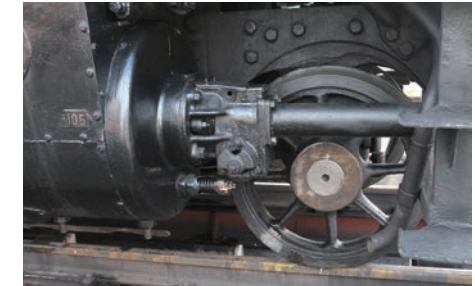
Assembled parts



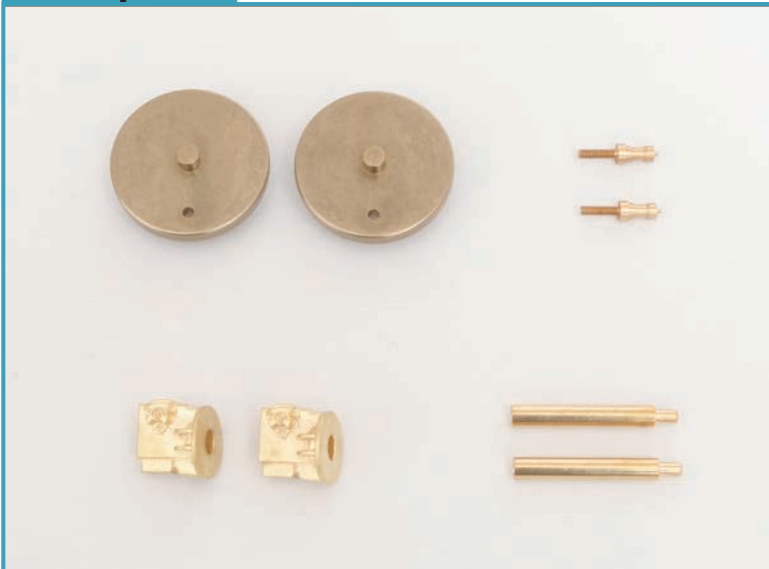
The front cylinder covers, safety valves and pistons



Pistons and cylinder covers



Your parts



Front cylinder covers × 2
Cylinder safety valves × 2
Piston rods × 2
Piston rod housings × 2

Required tools

Epoxy adhesive
Instant adhesive

1

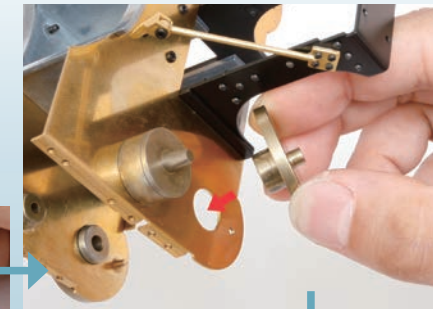
Fitting the front cylinder covers

Tip!

To prevent adhesive from seeping out between parts, apply only a small amount.



Apply epoxy adhesive to the back side of one of the front cylinder covers.

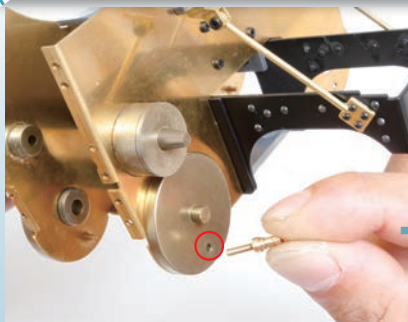


Insert the cylinder cover into the hole on the front plate below the steam chest cover.



Align the hole of the cylinder cover with the hole on the plate (circled).

2 Fitting the safety valves



Insert one of the safety valves into the hole (circled) on the cylinder cover.



Apply instant adhesive to the back of the safety valve.

Repeat this process to fit the second front cylinder cover and safety valve.



3 Preparing the piston rods



Apply epoxy adhesive to the thin end of the piston rod.

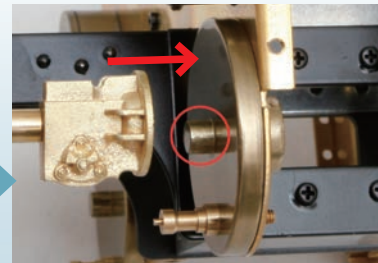


Insert the piston rod into the hole in the rectangular end of the piston rod housing.

4 Fitting the pistons



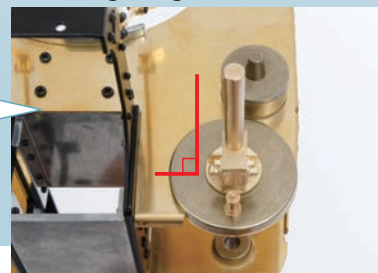
Apply some epoxy adhesive to the circular side of both piston rod housings.



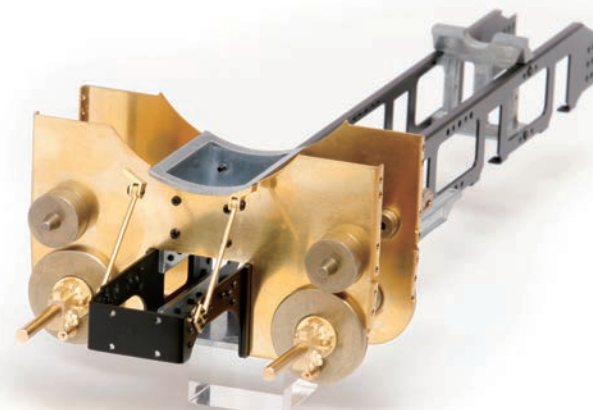
Place the housings onto the projections in the centres of the front cylinder covers (circled). Adjust the position of each housing so it is at a right angle to the covers.

Tip!

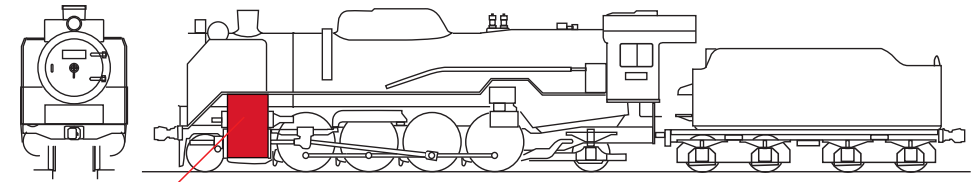
Make sure you don't wait too long before adjusting the positions of the piston rod housings, in case the epoxy dries.



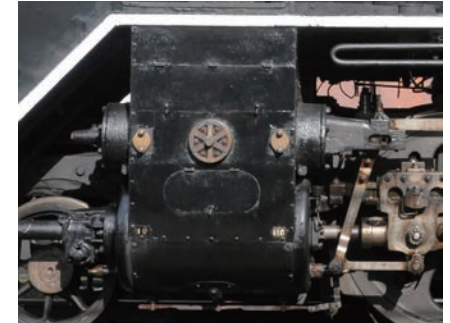
Assembled parts



The cylinder side plates



Cylinder side plates



Your parts



The two cylinder side plates are almost identical, so use the holes shown in the inset to identify them.

Cylinder side plate (left)
Cylinder side plate (right)
Inspection hatches × 2
Hole covers × 4
Air valve wheels × 2
Drainage pipes × 2
M2 × 2mm screws × 30

Required tools

Tweezers
Phillips screwdriver
Instant adhesive
Contact adhesive
Epoxy adhesive

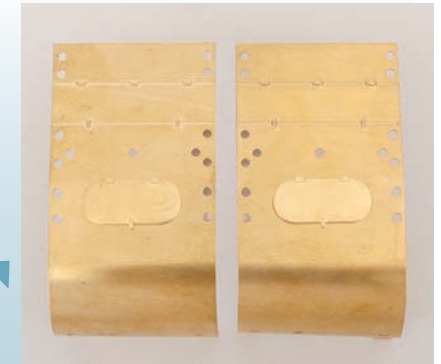
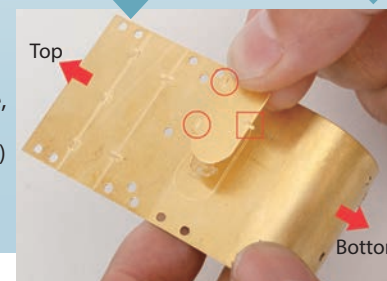
1

Fitting the inspection hatches



Apply epoxy or contact adhesive to the back of one of the inspection hatches.

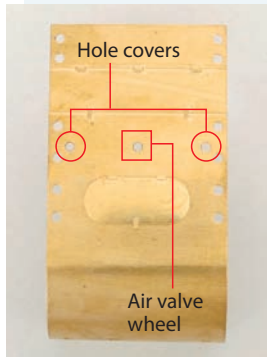
Fit the hatch onto the etched oval on the left cylinder side plate, positioned with the hinges (circles) pointing up and the latch (square) pointing down.



Hold the hatch in place until secure. Repeat this process for the right cylinder plate.

2

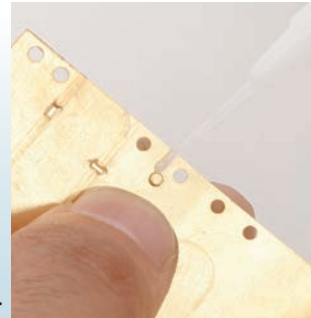
The side plate fittings



Locate the three highlighted holes on the left cylinder side plate.



Insert a hole cover into each of the two circled holes identified, then, holding them in place, turn the plate over and apply some instant adhesive to the back of them to fix them in place.



As with the covers, insert the valve wheel into its hole and secure with instant adhesive.

Repeat this for the right cylinder plate.



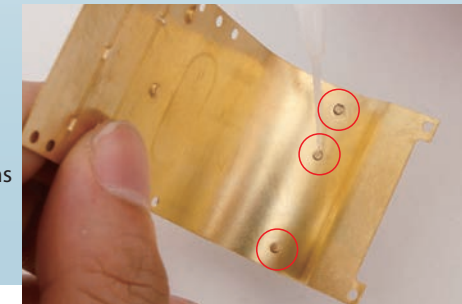
3

Installing the drainage pipe



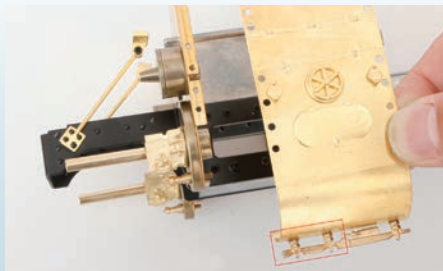
Insert the projections of one of the drainage pipes into the three holes (circled) on the curved area of the left side plate.

Turn the cylinder plate over and apply instant adhesive to the backs of the projections of the pipe (circled).



4

Fitting the cylinder side plates

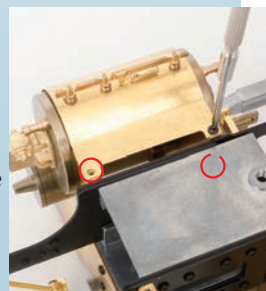


Position the left side plate on the left side of the front and rear cylinder plates, aligning the holes of both. The position of the two vertical parts of the drainage pipe, highlighted in the photo, should help you place it.



Tighten a screw into each of the 12 holes along the left plate, securing it to the front and rear plates.

Turn the assembly upside down and tighten a screw into each hole on the underside of the left plate. Then repeat the whole procedure for the right plate.



Assembled parts

