Hamilton
LABORATORY SOLUTIONS

Mobile Instrument Carts

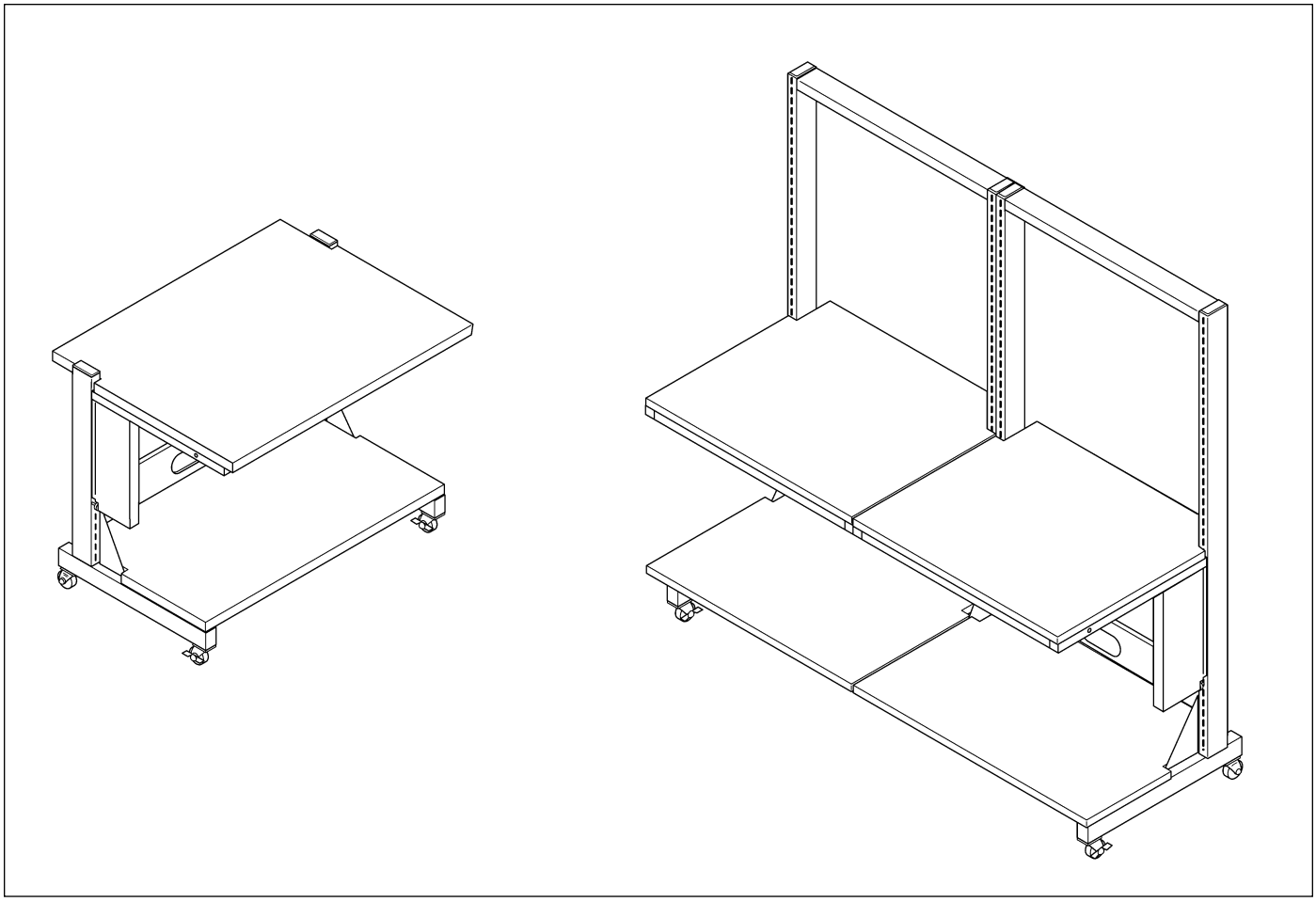
Installation Instructions

Thank you for purchasing one or more Hamilton instrument carts.

Various configurations exist for these mobile units. When ordering replacement parts, have a complete description of the mobile cart unit(s).

Before starting assembly, have the proper tools and required materials available and wear appropriate safety equipment.

Tools Required: (Not Included)
Tape Measure
Screwdrivers- Phillips head and flat head (No. 2 and 3)
Wrench Set-Open End or Box (1/4" to 3/4")
Allen Wrench Set - (5/16" Required)
Socket Wrench Set- 3/8" or 1/2" Drive
Marking Device (Pencil, Scribe, etc.)
Level
Rubber Mallet
2- 4" C-Clamps
Electric Drill and 1/8" Drill Bit



Mobile Instrument Cart Frame Configurations

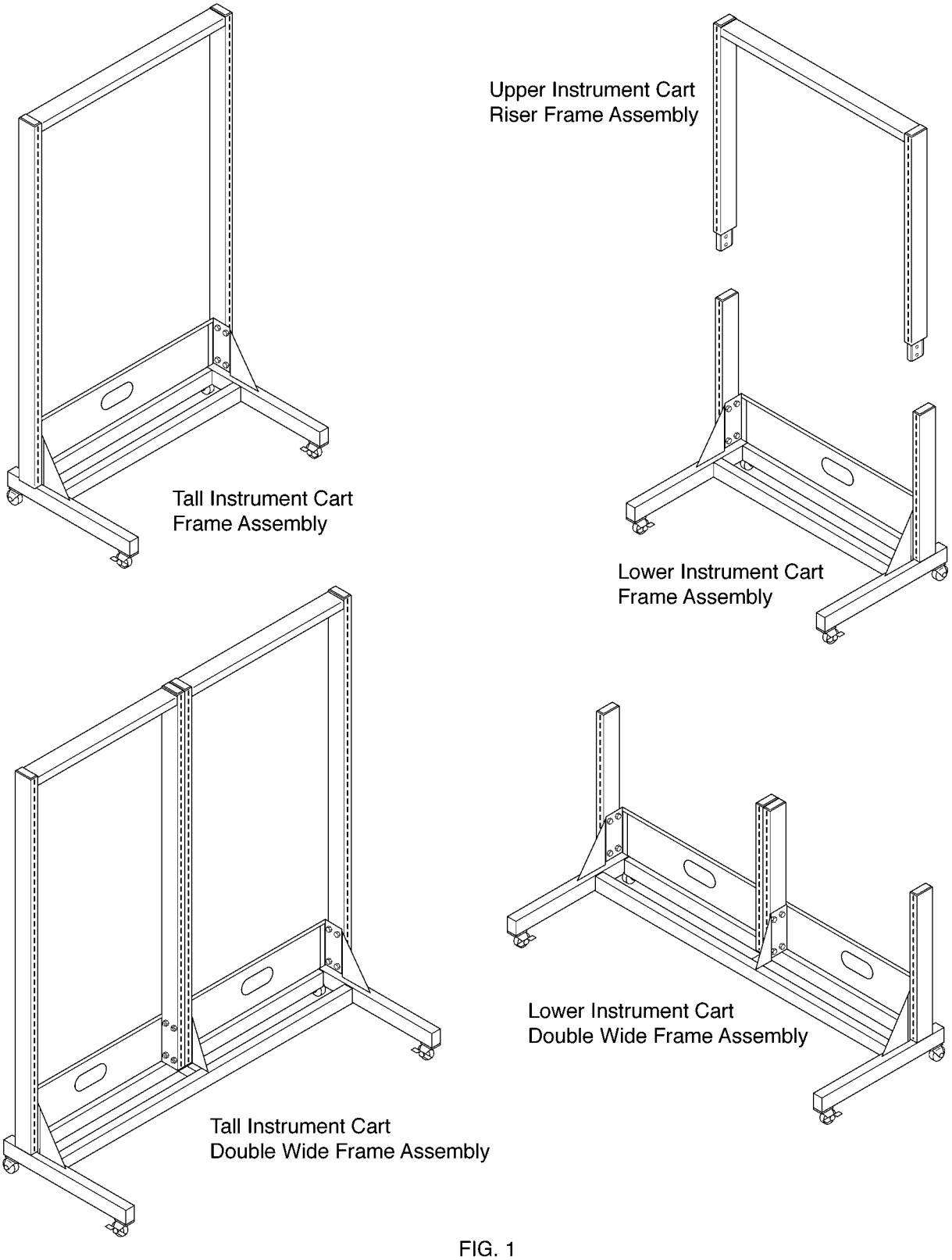


FIG. 1

A – Instrument Cart Preparation and Assembly

1. Check to make sure all parts have been shipped and are undamaged.

(Refer to Fig. 1 & 2)

2. Locate the appropriate lower frame assembly (1), jump connectors (3) and riser uprights (2).

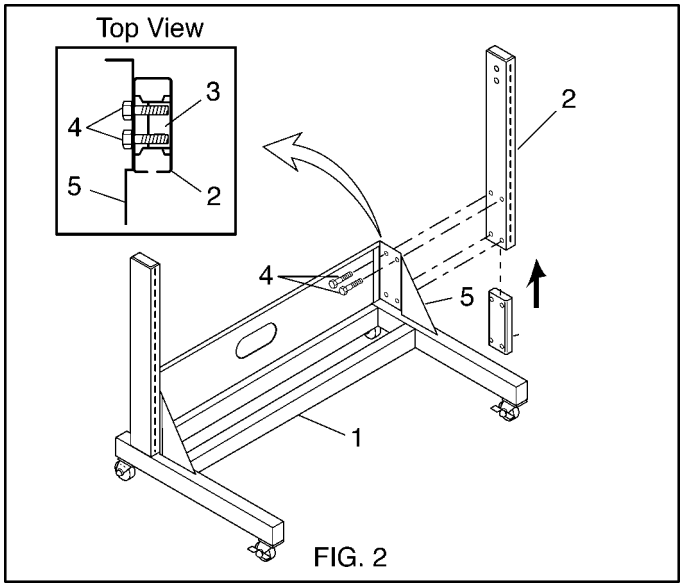


FIG. 2

3. Orient the riser uprights (2) with the adjustment slots facing to the front.
4. Attach a riser upright assembly (2) to each side of the lower frame gusset (5) and secure each side with four 3/8" x 1-1/4" hex head cap screws (4).

(Refer to Fig. 3)

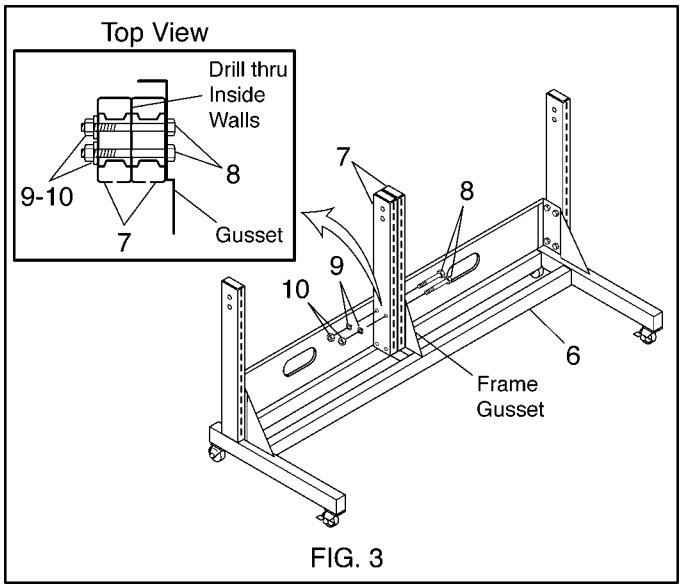


FIG. 3

5. When attaching double riser uprights to wider frame assemblies, it will be necessary to drill holes through the two inside riser walls.
6. Align the two riser uprights (7) so they are flush at the bottom and sides. Clamp the two risers together making sure they stay aligned. Use the existing holes as guides for alignment and proper drill size. Select the proper drill bit 13/32", and drill the two inner wall holes.
7. Locate two 3/8" x 3" hex head bolts (8) and insert them through the lower frame gusset and the two risers. Insert lock washers (9) and secure bolts with 3/8" hex nuts (10).

B – Installing Upper Riser Sections to Lower Cart Frames

(Refer to Fig. 4)

1. Remove the riser caps (11) and hole plugs (12) from the tops of the lower riser upright assemblies (2).

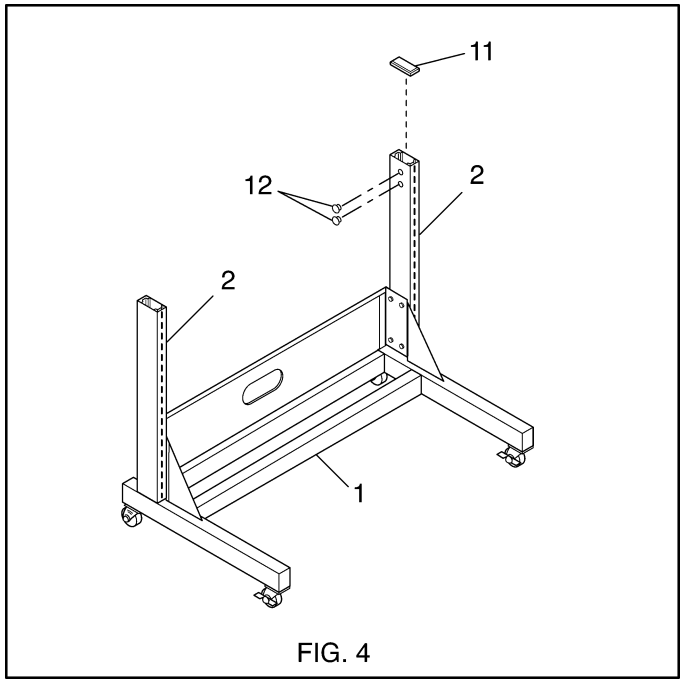


FIG. 4

(Refer to Fig. 5)

2. Insert the upper riser assemblies (14) into the lower frame risers (2). Secure the two assemblies using two 3/8" x 5/8" socket head cap screws (15) on each side.

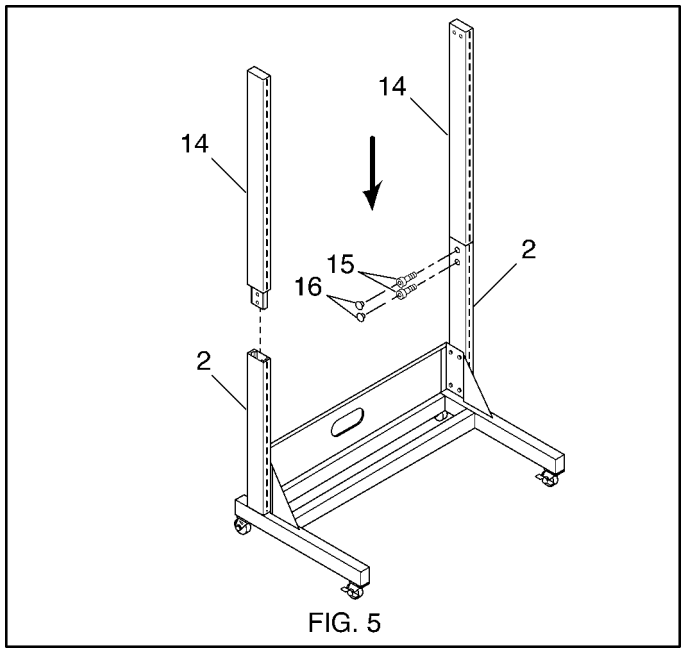


FIG. 5

3. Locate the socket screw caps (16) and firmly press one cap into the center of each cap screw head (15).

(Refer to Fig. 6)

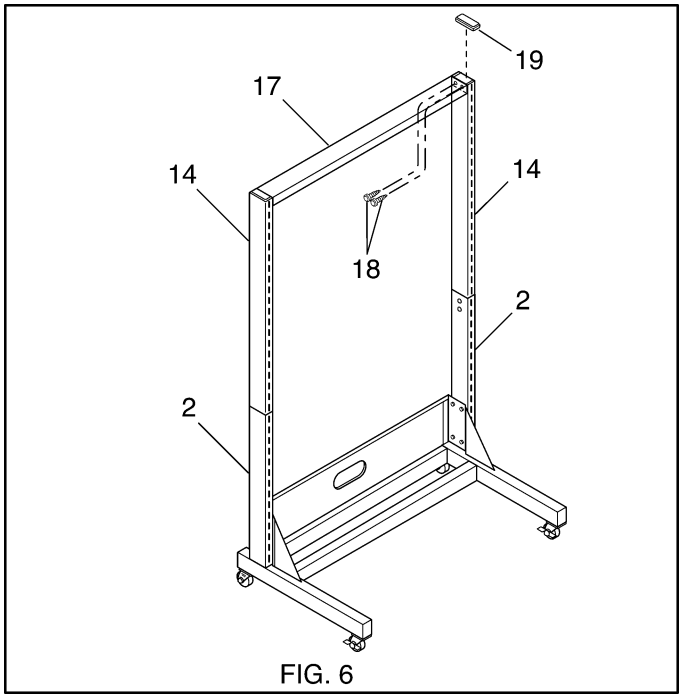


FIG. 6

4. Locate the upper cross rail (17) and position it at the top and between the two upper riser assemblies (14) previously installed.
5. Secure each end of the cross rail (17) to the risers using two #12 x 1/2” pan head sheet metal screws (18).

C – Attaching Lower Shelf to Lower Cart Frames

(Refer to Fig. 7)

1. Locate the lower shelf support brackets (21).

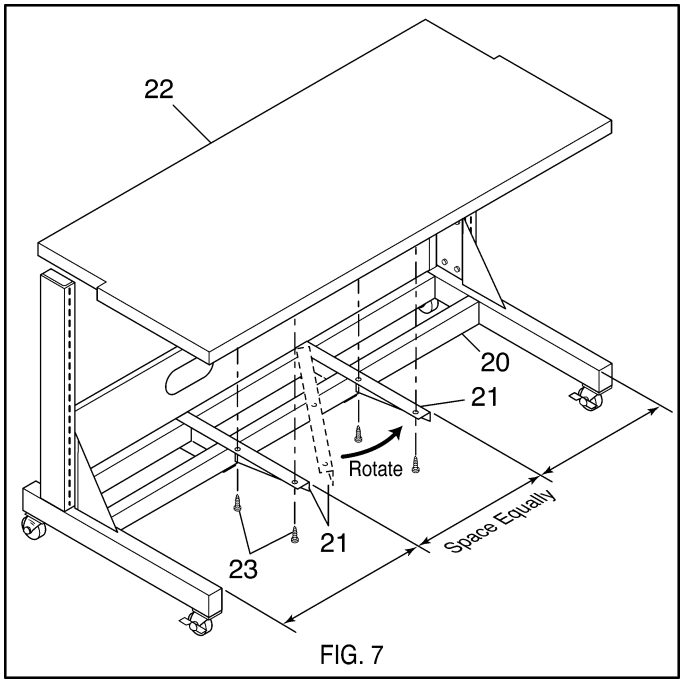


FIG. 7

2. Place each shelf bracket (21) at approximately a 45º angle between the lower frame braces and rotate into place perpendicular to the frame bracing. The top and bottom flanges of the shelf brackets should slide over the top and bottom of the frame braces locking the brackets in place. Allow equal spacing between shelf brackets and lower frame ends.
3. Locate the lower shelf (22) and properly position it on the lower frame (20) and shelf brackets (21).
4. With the help of an assistant, carefully hold or clamp the shelf (22) to the lower frame assembly. Tilt the table back. Drill four 1/8” pilot holes in the shelf (22) using the existing holes in the shelf brackets (21) as guides.
5. Secure the shelf to the shelf brackets (21) using two #10 x 1" pan head screws (23). Turn frame assembly upright and remove the clamps.

D – Attaching Cantilever Tables to Mobile Cart Frames

(Refer to Fig. 8)

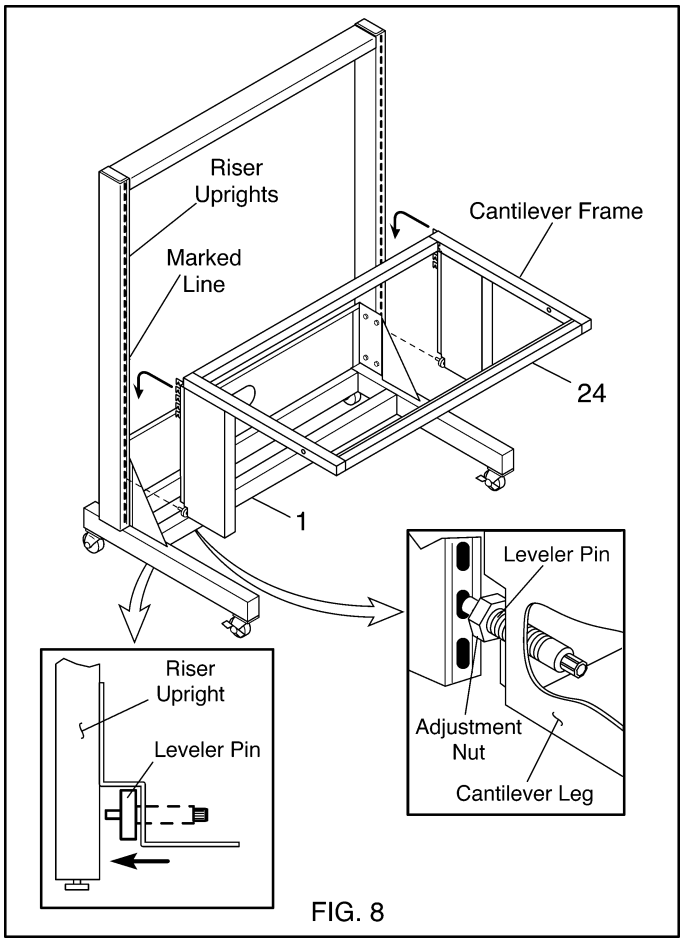


FIG. 8

1. Cantilever shelves are shipped in two parts consisting of a frame assembly and top. All mobile cart frames must be fully assembled and leveled before tables or shelves are attached.
2. Determine overall height from floor to shelf top. Subtract 3" from the height and mark a line on each riser upright.
3. Locate the cantilever frame (24) and make sure the leveler pins at the bottom of the cantilever legs are screwed all the way in.
4. Attach the cantilever frame assembly (24) by inserting the hooks into the riser upright slots that were marked previously.

Note: To make sure cantilever legs are securely seated to the riser assemblies, strike the rear of the cantilever frame in a downward direction with a rubber mallet.

5. Level the cantilever frame, from front to back, by adjusting the leveler pins using a 1/2" wrench. A level may be used if necessary. If pins do not engage slots, table is not attached or seated correctly. See note above.

(Refer to Fig. 9)

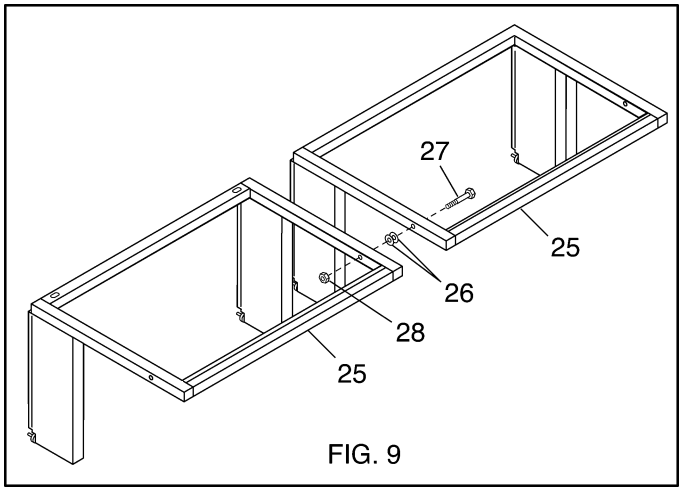


FIG. 9

6. When cantilever shelves are installed next to each other and at the same height, they must be bolted together.
7. Insert a 5/16" x 3-1/2" hex head bolt (27) through the holes located at the front of the cantilever frames (25). Spacer washers (26) may be required as shims between the cantilever frames to keep the frames from becoming distorted when the bolt is tightened.
8. When proper spacing has been determined, attach the nut (28) and tighten.

(Refer to Fig. 10)

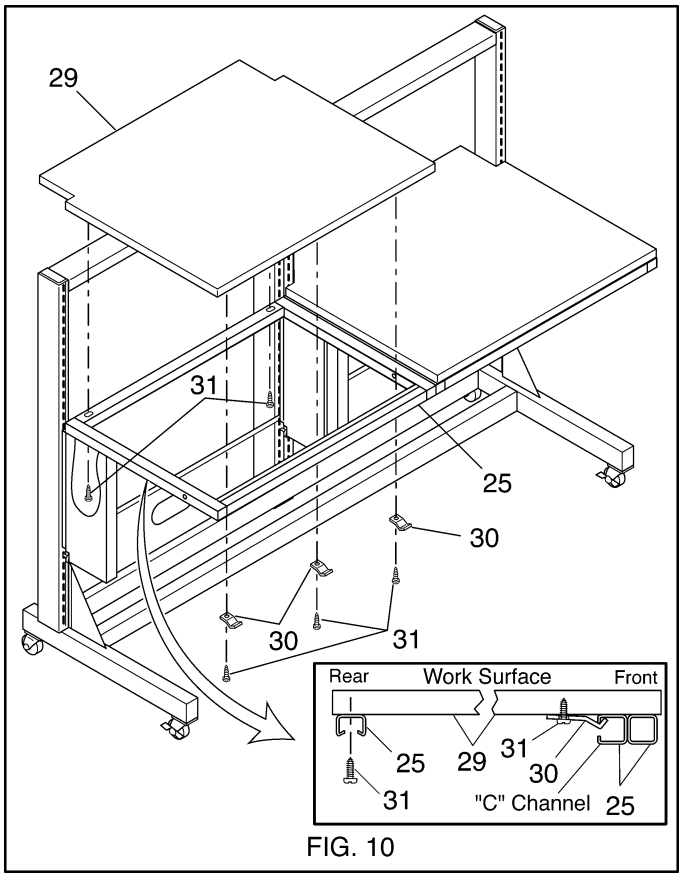


FIG. 10

9. Position the shelf unit (29) onto the cantilever frame (25) allowing a slight overhang at the front.
10. When the shelf is properly positioned, clamp it to the cantilever frame. Attach the shelf by inserting a #10 x 1" pan head screw (31) through the slots at the rear of the cantilever frame (25) and into the shelf bottom (29). If necessary, 1/8" pilot holes may be drilled into the shelf bottom prior to inserting the screws.
11. The front of the shelf is anchored to the front of the cantilever frame using top bracket clamps (30) (See inset Fig.10) . The number of brackets required is dependent on the length of the shelf. A general rule is one bracket per foot of shelf length. These brackets clamp over the edge of the ”C” channel which is part of the front cantilever frame.
12. Locate the number of top brackets (30) required. Hook each bracket over the ”C” channel. Using the hole in the bracket as a guide, mark and drill 1/8" pilot holes for each top bracket.
13. Insert a #10 x 1" pan head screw (31) through each top bracket (30) and tighten clamping the shelf in place. Remove the clamps.
14. Use the same procedure for attaching additional shelves when required.

E – Attaching Lattice Brackets to Mobile Carts

(Refer to Fig. 11)

1. Lattice bars may be attached to either the front or rear of the riser uprights.

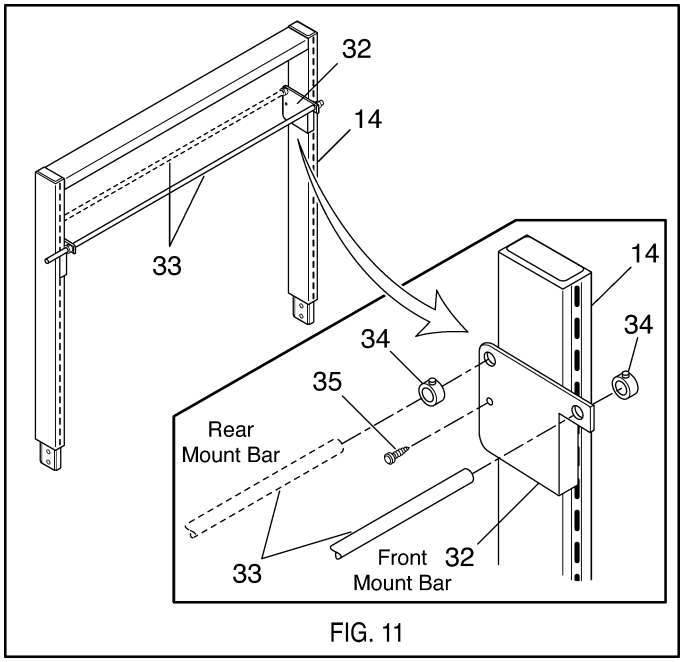


FIG. 11

2. For front mounting, slide the lattice bar (33) through the front holes of the lattice brackets (32). Determine the desired height and insert the lattice bracket hooks into the riser upright slots (14).
3. Secure the lattice bar (33) to the lattice brackets (32) by sliding the locking collars (34) on the outside of the lattice brackets (32). Tighten the locking collar set screws.
4. Front mounting lattice bracket assemblies require an additional screw to hold or lock it to the riser uprights.
5. Insert a #10 x 1" pan head screw (35) through the small hole located at the rear of the of the lattice bracket (32). The screw should rest behind the riser upright locking the assembly in place. **Note:** #10 screw not furnished.
6. To attach the lattice bar to the rear of the riser uprights, first slide the locking collars (34) onto the lattice bar (33). Slide the lattice bar into the rear holes of the lattice bracket (32) and slide the locking collars against the inside of the lattice bracket. Tighten the locking collar set screws to complete assembly.
7. This completes mobile instrument cart assembly.