Shop Dustpan 🧹

Sheet Metal Worker

Shop Dustpan

Provided Materials

1. Metal sheet
2. Brush
3. Wooden handle
4. Screw
5. 1/8" rivets and washers
6. Riveter
7. Tin snips
8. Screwdriver
9. Folding tool
10. Hand seamer
11. Safety glasses
12. Gloves

Required Materials
- Felt Pen
- Ruler

⚠ **Safety First.**
Before you begin, put on safety glasses and work gloves.

Legend
Bending line: ————
Measuring line: ————
Cutting line: – – – – –
9/64" hole: ⊕

Instructions

1. **Mark the metal sheet.**
   Using the ruler and felt pen, follow the diagram and mark the lines on the metal sheet.

2. **Trim.**
   Using the tin snips, trim the corners along the angled dash lines shown in the diagram.
   Do not cut the straight dashed lines yet.
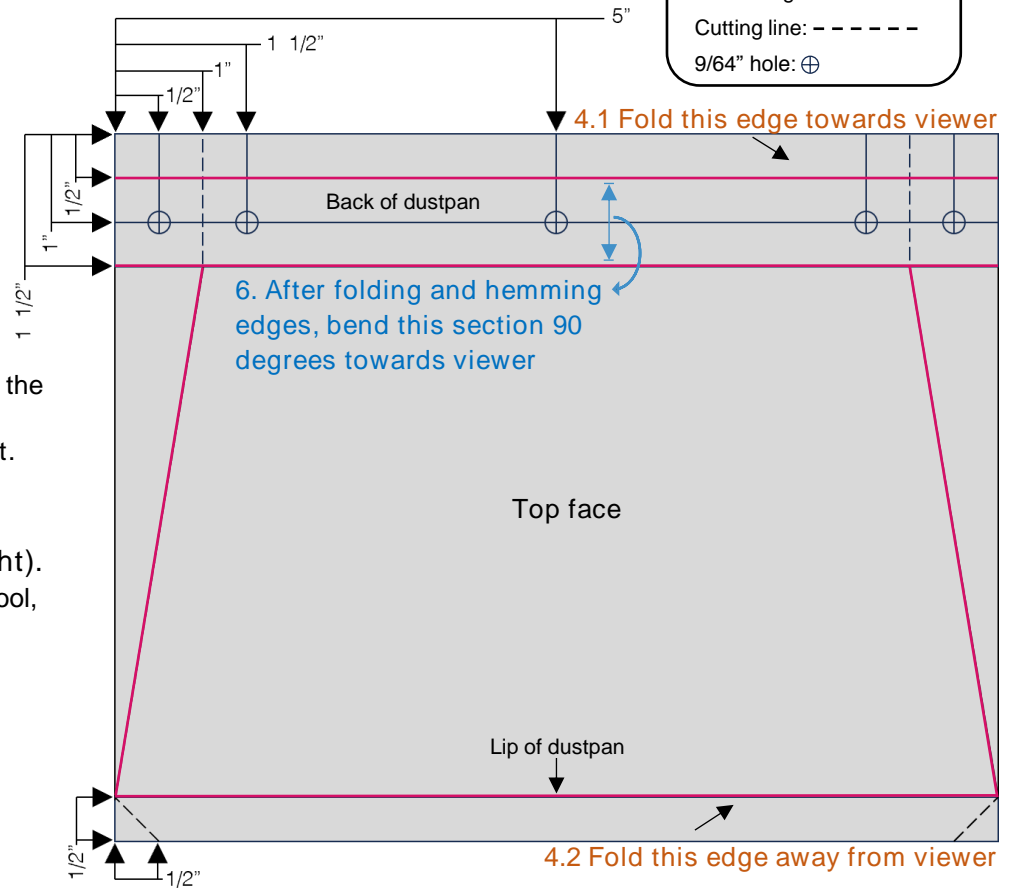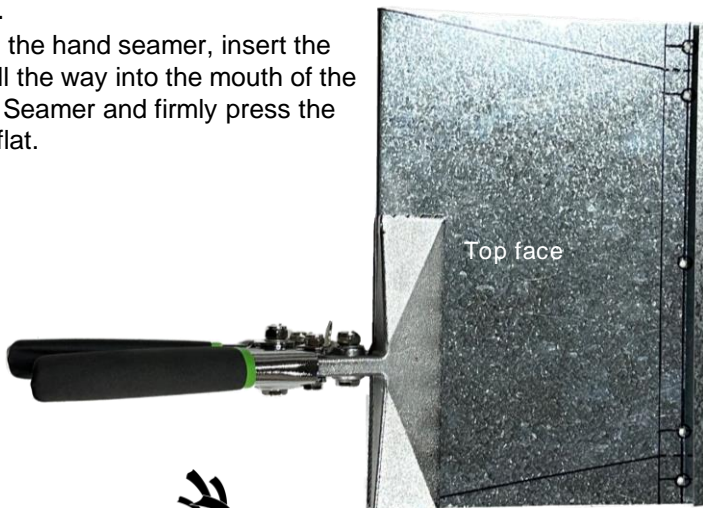
3. **Fold (see the orange font to the right).**
   Using the shallow opening in the folding tool, fold the top and bottom edges in opposite directions (4.1, 4.2 on the diagram).
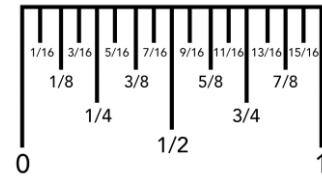
Lip of dustpan

Top face

4. **Hem.**
   Using the hand seamer, insert the fold all the way into the mouth of the Hand Seamer and firmly press the folds flat.

Top face

Diagram labels

5"
1 1/2"
1"
1/2"
1/2"
1"
1 1/2"
1/2"
1/2"

4.1 Fold this edge towards viewer

Back of dustpan

6. After folding and hemming edges, bend this section 90 degrees towards viewer

Top face

Lip of dustpan

4.2 Fold this edge away from viewer

Fractional divisions of an inch:

1/16 3/16 5/16 7/16 9/16 11/16 13/16 15/16
1/8   3/8   5/8   7/8
1/4   3/4
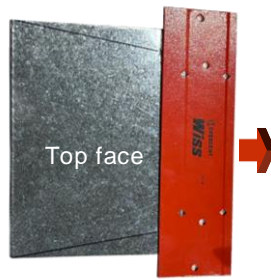1/2
0   1

Folding Tool

A sheet metal folding tool bends the raw edges of the sheet metal over so you can use the hand seamer to hem the edges.

The folding tool has a shallower opening and a deeper opening, depending on the size of fold you want. It also has sight holes to help you align the metal inside the tool.

6. **Bend the marked edge (blue font).** Using the deep side of the folding tool, bend the edge 90 degrees up, towards the viewer.

Top face
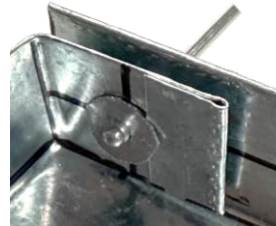
7. **Cut.**
   Cut the straight dashed line.

8. **Bend sides.**
   a. Slightly bend the freed section towards the top face, as shown above.
   b. Bend the sides up, keeping the folding tool slightly outside the line. This will give the best chance to line up the holes.

9. **Rivet.**
   a) Align holes with hand seamer if required.
   b) Put the mandrel into the head.
   c) Squeeze the handle a bit to secure.
   d) Push the shank through the holes.
   e) Add a washer to the rivet shank.
   f) Squeeze the rivet tool a few times, until the mandrel pops off.
   g) Clear the tool for the next use by opening the handles all the way until the rivet mandrel drops out..

10. **Ensure front lip of pan is flat to ground.**

By hand, make any slight adjustments to the pan lip to ensure the pan lip is flat to a reference surface, like a table.

11. **Attach handle.**
Using the screwdriver, secure the wooden handle to the pan. Use the Tin Snips to trim any sharp corners.
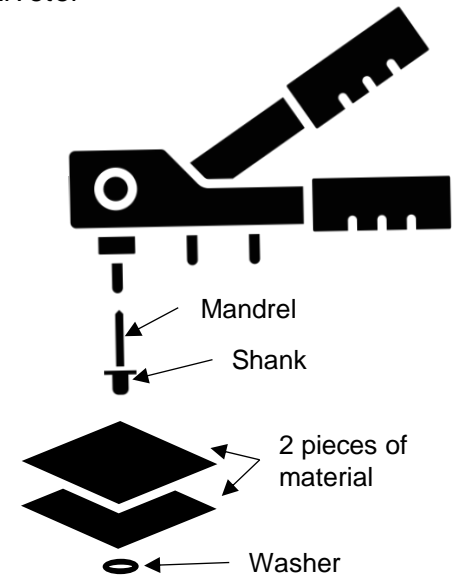
Hand seamer

Sheet metal work involves hemming" and "seaming". Hemming means to clamp a folded edge tightly against the rest of the sheet metal. This tucks away the sharp edge and gives it a smooth finish. Seaming joins the edges of two sheets. In this project, you use hand seamers to hem (finish) cut edges.

Hand seamers are also known as "sheet metal hand brakes". The word "brake" comes from Middle English (1100s-1400s). It meant "to bend" or "change direction".

Riveter

Mandrel

Shank

2 pieces of material

Washer

A rivet is a permanent fastener.

A riveter has interchangeable heads on the handle. Use the wrench on the handle to match the head size to the rivet.

Watch this short animation of how a rivet works:

Try-A-Trade® Takeout Program	
Activity: Shop Dustpan	V3
Skill Area: Sheet Metal	
CTS Cluster: TMT	

Shop Dustpan 🧹

Project

Students cut, bend, rivet, and seam sheet metal to fabricate a custom-made, functional product.

Sheet Metal Worker 🔨

Schooling

- Four-year apprenticeship.
- Red Seal Journeyperson.
- Start early with the Registered Apprenticeship Program (RAP) or explore options available through Career and Technology Studies (CTS).

Jobs

- Design, fabricate, assemble, install, and repair sheet metal products for a variety of commercial and industrial applications.
- Average salary: $67,075.00/year
- Average wage: $31.75/hour

More information:

Find your trade:
Or visit:
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