

No. 837,966.

PATENTED DEC. 11, 1906.

M. J. SCHUILING,
SHEET METAL WORK.
APPLICATION FILED AUG. 28, 1905.

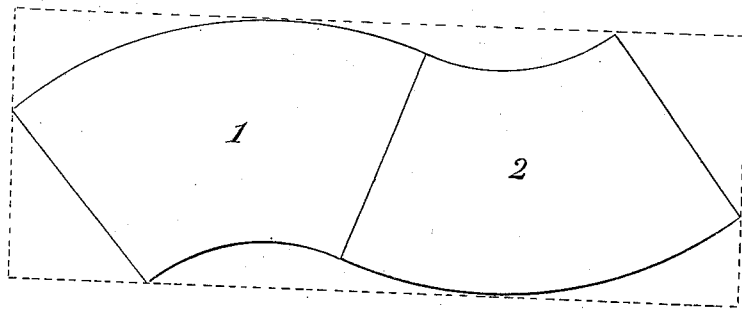


Fig. 1.

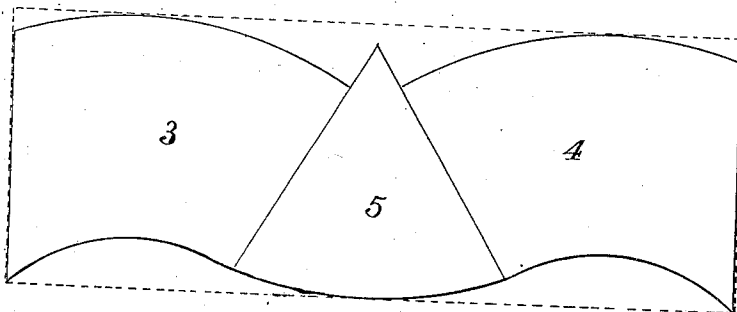


Fig. 2.

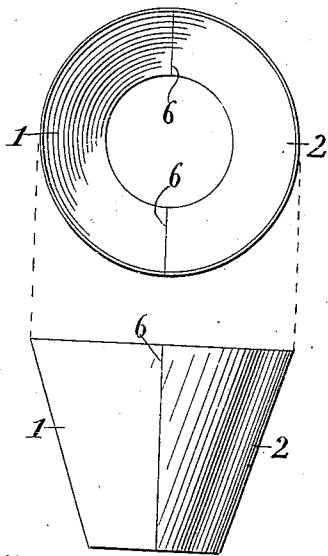


Fig. 3.

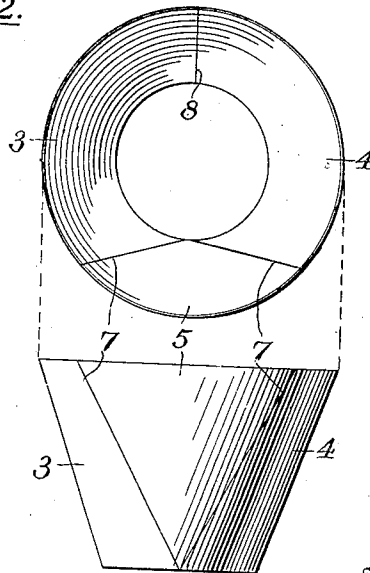


Fig. 4.

Witnesses

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MARTIN J. SCHUILING, OF GRAND RAPIDS, MICHIGAN.

SHEET-METAL WORK.

No. 837,966.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MARTIN J. SCHUILING, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Sheet-Metal Work; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in the art of sheet-metal work, and more particularly to what is known as "flared work" or the constructing of truncated conical work of sheet metal, such as the sides of pails, pans, or other conical structures of various kinds; and its object is to sever the various portions of sheet metal as to materially economize the material used for a given structure and to reduce the waste material of rectangular sheets when used to form such structures, as will more fully appear by reference to the accompanying drawings, in which—

Figure 1 is a diagram showing the usual and prior method of cutting or severing the sheets used for such work from a given sheet; Fig. 2, a plan showing my improved method of cutting or severing a sheet of the same size as that shown in Fig. 1; Fig. 3, a side elevation and plan of a truncated cone formed of the material available from a sheet of a certain size by the method shown in Fig. 1; and Fig. 4, the same when formed of the material made available from a sheet of the same size by my improved method, Figs. 3 and 4 being illustrative of the relative dimensions of the structures produced from the same sized sheets by the respective methods.

Referring now to Fig. 1, the dotted outline represents the dimensions of a sheet from which by the usual method of reverse curves two segments 1 and 2 of the largest dimensions possible are shown by the solid lines. Fig. 2 shows a dotted-line outline of a sheet of the same size as that of Fig. 1, from which by means of my improved method three pieces are severed having the same radii as the pieces 1 and 2, the pieces 3 and 4 having radial outlines at one end only, the other end of each corresponding to the outline of the sheet and parallel to each other, thus

forming no waste at the ends of the sheet except a very small amount at the outer ends of the outer radius. These pieces 3 and 4 are severed on lines concentric with centers located opposite the same side of the sheet and with the adjacent ends severed on radial lines from their respective centers, the piece therebetween being of a triangular form, the side adjacent to the edge of the sheet being severed on a radius corresponding to the larger radius of each of the pieces 1, 2, 3, and 4 and its other sides having a length equal to the outer ends of the segments 3 and 4 and severed on the radial lines of the other ends of the same and also extended to a point.

When made up into a truncated cone, the pieces 1 and 2 form a vessel of the relative size represented in Fig. 3, with two seams extending in the plane of its axis, while the three pieces 3, 4, and 5 when made up into a truncated cone will have the relative size represented by Fig. 4, with one seam in the plane of its axis and two seams 7 inclined to the plane of its axis and converging to a point at the small end of the cone. By this method I am thus able to materially economize the amount of stock used for a given size of structure with otherwise equally good results.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The herein-described step in the art of making flared work, comprising severing a rectangular sheet into three parts, to wit: two segments having their curved sides concentric with centers located opposite the same side of the sheet and having their outer ends severed on parallel lines corresponding to the ends of the sheet and having their adjacent ends severed on lines radiating from said centers and converging to a point within the sheet and a third triangular piece having two sides severed on the radial line of the segments, and a third side severed on a curved line joining the angles of the segments.

2. The herein-described step in the art of making flared work, comprising severing a rectangular sheet into three parts to wit: two curved segments each having their curved sides concentric with respective centers both located at the same side of the sheet, and having their adjacent ends severed

on lines radiating from said centers, and also
having their outer ends severed on parallel
lines, corresponding to the ends of the sheet,
and a third piece having its sides on the lines
5 of severance of the inner ends of the first-
named segments, and of a length equal to the
width of the outer ends of the said segments.

In testimony whereof I affix my signature
in presence of two witnesses.

MARTIN J. SCHUILING.

Witnesses:

LUTHER V. MOULTON,
GEORGIANA CHACE.