(No Model.) 2 Sheets—Sheet 1.

W. W. JONES.

MACHINE FOR MAKING RIMS FOR METAL VESSELS.

No. 244,250. Patented July 12, 1881.

Fig. 1.

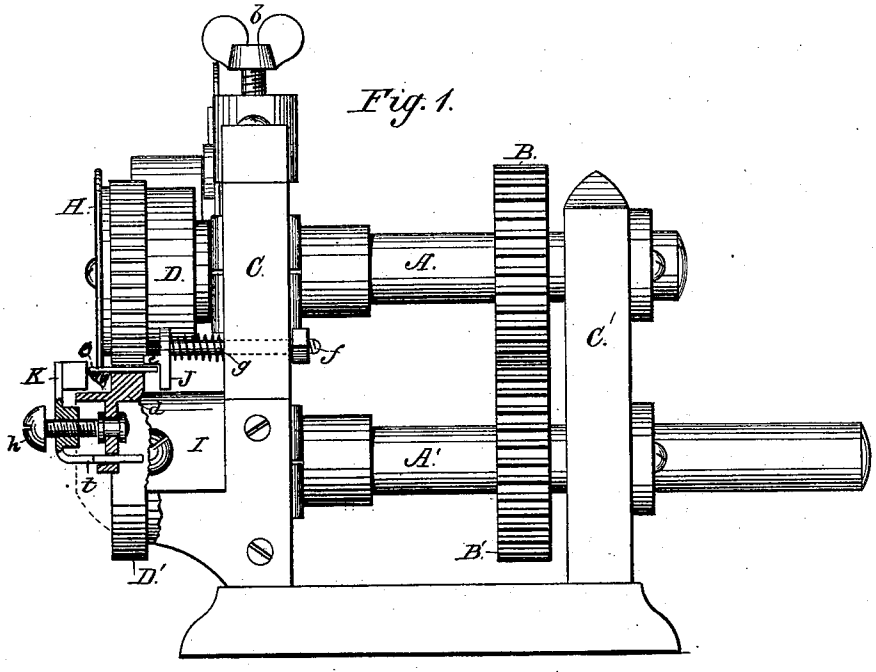
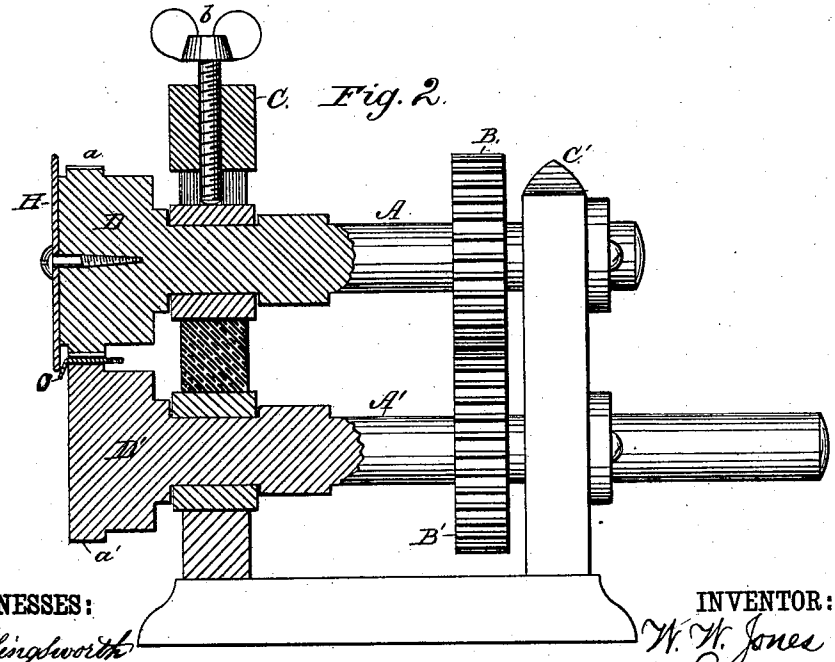


Fig. 2.



WITNESSES:

W. W. Hollingsworth

Edw. U. Byers.

INVENTOR:

W. W. Jones

BY Munn & Co

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

W. W. JONES.

MACHINE FOR MAKING RIMS FOR METAL VESSELS.

No. 244,250. Patented July 12, 1881.

Fig. 3.

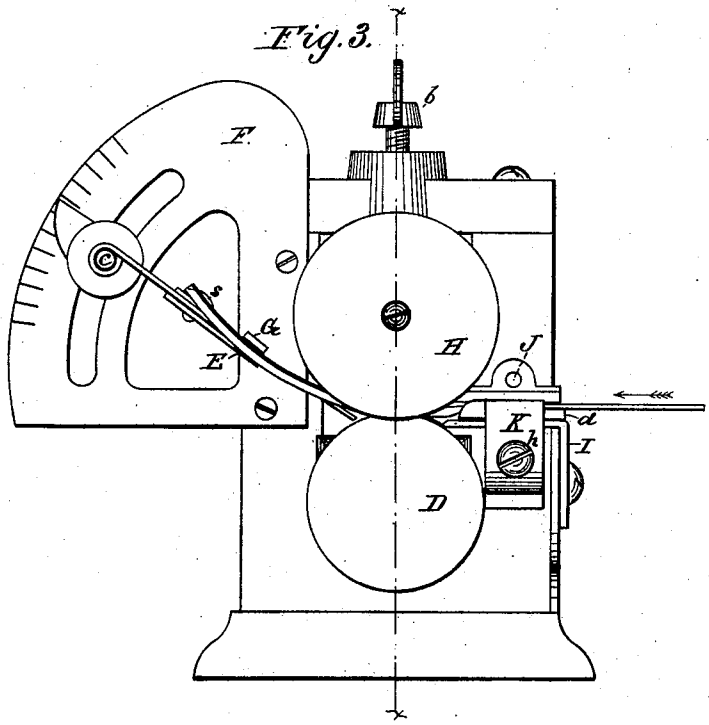
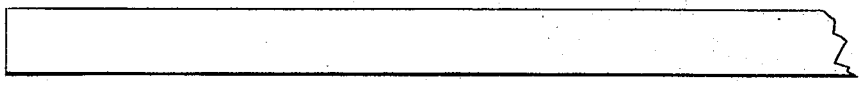


Fig. 4.

Fig. 5.



WITNESSES:

W. W. Hollingsworth

Edw. W. Byrn.

INVENTOR:

W. W. Jones

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM W. JONES, OF NASHVILLE, TENNESSEE.

MACHINE FOR MAKING RIMS FOR METAL VESSELS.

SPECIFICATION forming part of Letters Patent No. 244,250, dated July 12, 1881.

Application filed December 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. JONES, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and Improved Machine for Making Rims for Metal Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation with a part of the frame broken away to show the adjustment of the gage. Fig. 2 is a similar view, partly in section through the line *x x* of Fig. 3. Fig. 3 is an end view. Fig. 4 is a section of one of the rims formed by the machine; and Fig. 5 a view of the blank from which the rim is formed.

My invention relates to a machine for forming rims for the covers of sheet-metal vessels, which rim is in the nature of a hoop or band of metal having on one of its edges an outturned flange. In my patent of December 28, 1880, I showed a machine for forming such an article; but in that machine the strip of metal required to first have its edge or flange folded by a preliminary operation before being acted upon by the machine. My present device contemplates the taking of a plain flat strip of metal, and at the same time turning its edge and flaring and curving the strip without any preliminary operation; and to this end the improvement consists in dispensing with the horizontal wheel or third roller for holding the flange of the strip, and employing in the place of the same a detachable and adjustable disk attached to the upper milled roller, and of greater diameter than the same, so as to project to form a flange, and combining with the two rollers guides for holding and guiding the metal strip as it is fed to the same, as hereinafter fully described.

In the drawings, A A′ represent the two shafts or gudgeons, carrying rigid gear-wheels B B′, meshing into each other, which shafts or gudgeons are arranged in suitable journal-boxes in the supports C C′. These shafts have outside of the support C rollers D D′, constructed with a portion of their peripheries *a a′* of larger diameter than their other portions, and the larger portion, *a*, of the upper roller is milled or fluted. The box of the upper roller is spring-seated, and said upper roller is forced down against the lower roller by a set-screw, *b*. From the tangential point of the two rollers there proceeds a plate, E, Fig. 3, which receives the strip and determines its formation. This plate is connected by a set-screw, *c*, with a curved slotted gage-plate, F, to regulate the inclination of said plate E, and controls the curvature of the hoop being formed, a holding-finger, G, being adjustably connected to plate E by a set-screw, *s*, and co-operating also to the same end, if desired.

As so far described my present machine does not differ substantially from that already shown in my patent referred to. In improving upon that construction I attach to the perpendicular face of the upper roller, D, a stiff metal disk, H, which is of larger diameter than the roller, and projects so as to form a flange. This disk takes the place of the third wheel or roller in my previous construction, and serves to turn over the edge or flange of the strip at the same time that the strip is curved by passage between the rollers. To adapt this disk to different thicknesses of sheet metal, it is to be attached to the face of the roller adjustably, so as to be set closer to or farther from the face of the rollers. In my previous construction a third wheel served to hold the previously-bent flange, while the rollers did the flaring or stretching and curving. In the present construction the periphery of the disk turns down the edge of the metal strip over the face of the lower roller, as shown at *o*, Fig. 2.

To hold and guide the flat strip of metal as it is fed to the machine, a plate or table, I, is provided, with a raised face, *d*, on the outer side of which there is room for the edge of the metal strip to be turned down. On one side of the raised face *d* is a spring-seated guide, J, and on the other side is an adjustable gage, K, between which guide and gage the strip of metal is fed to the rollers. This spring-seated guide has an overhanging flange, *e*, which prevents the back edge of the metal from rising up, while the spring-seated character of this guide allows it to recede slightly to pass any slight irregularity in the width of the strip. This guide has a stem, *f*, that passes through the journal-support, and is provided with a nut and a threaded end, while between the

guide and the journal-support is arranged a spiral spring, *g*. The gage K is made adjustable for an increased or diminished width of strip by a set-screw, *h*. This set-screw has its inner end swiveled in a vertical portion of plate I, while its threaded stem passes through a female thread formed in a thickened portion of the gage K, as shown in Fig. 1, so that by turning this set-screw the gage is set in or out, as desired. A right-angular tail-piece, *t*, of gage passes, in the adjustment of the gage, through a hole in the vertical part of plate I, and acts therewith as a guide to steady the upper edge of the gage.

Now, in operating this machine, a perfectly plain strip of metal, as in Fig. 5, is taken and fed to the machine between the spring-guide and gage-stop, and as it passes between the rollers the flange or disk on the upper roller turns down the right-angular edge, and at the same time the milled surface of the roller corrugates and flares the strip, while the plate E causes the strip to be curved into a hoop, as shown in Fig. 4. With respect to the article formed by this machine, and illustrated in Fig. 4, I would state that, this being considered a distinct invention, I do not claim the same in this application, but reserve the right to do so in a subsequent application which I contemplate making.

In making use of my construction the milling and disk may be either upon the upper or the lower roller.

Having thus described my invention, what I claim as new is—

1. The combination of two rollers, one of which has a raised milled periphery, a disk or flange attached to the flat face of one of said rollers, and suitable guides for holding and guiding the strip to the rollers, as described.

2. The combination of two rollers, one of which has a raised and milled periphery, a disk adjustably attached to the face of one of said rollers, a spring-seated guide, J, and an adjustable gage, K, substantially as and for the purpose described.

WM. WASHINGTON JONES.

Witnesses:
E. S. SHIPP,
H. W. BUTTORFF.