

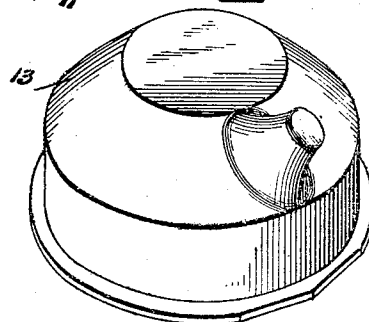
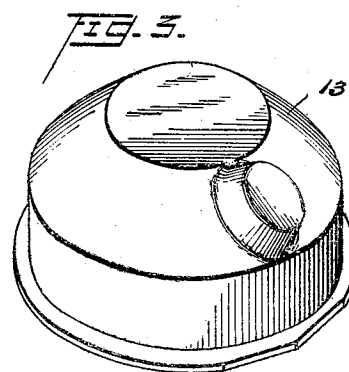
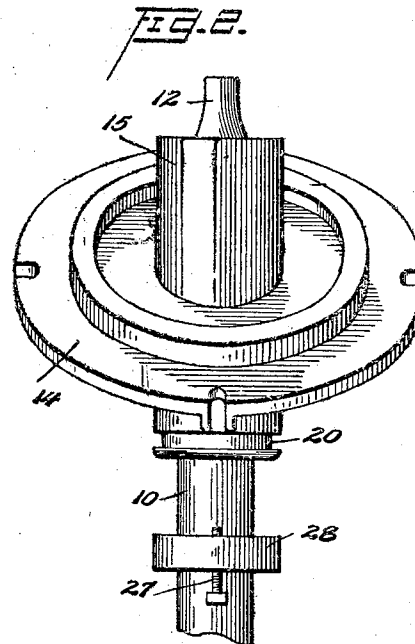
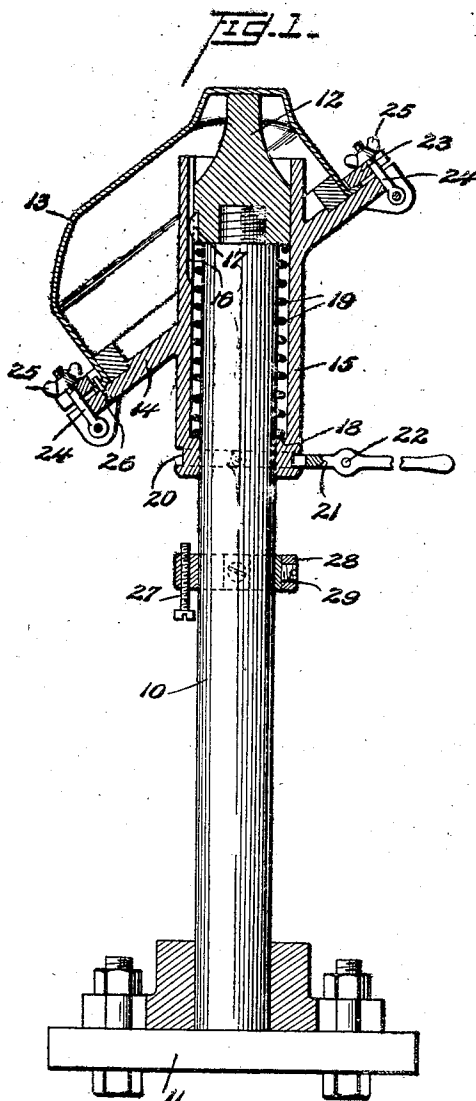
July 8, 1924.

G. E. PAGE

1,500,261

SHEET METAL SPINNING MACHINE

Filed April 18, 1921



Inventor

FIG. 4. George E. Page,

By Watson, Peck, Morse & Grindle,

Attys

UNITED STATES PATENT OFFICE.

GEORGE E. PAGE, OF ROCHESTER, NEW YORK, ASSIGNOR TO MONTOUR ALUMINUM SOLDERING CORPORATION, OF MONTOUR FALLS, NEW YORK, A CORPORATION OF NEW YORK.

SHEET-METAL-SPINNING MACHINE.

Application filed April 18, 1921. Serial No. 462,218.

To all whom it may concern:

Be it known that I, GEORGE E. PAGE, a citizen of the United States, and residing at Rochester, Monroe County, State of New York, have invented certain new and useful Improvements in Sheet-Metal-Spinning Machines, of which the following is a specification.

The present invention relates to machines for spinning sheet metal articles.

The object of the invention is to provide a machine which is particularly adapted to be used in spinning a protuberance or nose on a sheet metal article which nose is eccentrically positioned relative to the main portion or body of the article. In my co-pending application, Serial No. 462,214, filed April 18, 1921, a method of forming a sheet metal vessel having an integral tubular spout is fully described, and apparatus for carrying out the steps of the method is illustrated. The machine herein described, illustrated and claimed is similar to the machine described in the application referred to for performing the third step of the method, that is, in spinning an eccentrically positioned frusto-conical nose or protuberance into an elongated tubular nose. While the machine is particularly adapted to be used in forming a tubular nose on a sheet metal vessel or container it will be understood that it is of general application and may be used in spinning tubular projections on sheet metal articles of vastly different size and shape, the machine being susceptible of considerable modification within the scope of the invention. In the drawings:

Figure 1 is a longitudinal section through the machine showing the work in position;

Figure 2 is a side view of the same the work having been removed;

Figure 3 is a perspective view of the work or shell before the spinning operation has been performed; and

Figure 4 is a similar view of the work after the spinning operation.

The shaft 10 of the device is supported at its lower end upon a base member 11 which is adapted to be secured to the revoluble face plate of a lathe or similar machine and has fixed on its upper end a spindle or mandrel 12 of a shape substantially corresponding to the desired shape of

the nose or protuberance of the finished article. The shell or work 13 is mounted upon a work holding platform 14 which is secured to or integral with a sleeve 15 fitting around the shaft 10 and longitudinally movable relative thereto. This sleeve is provided interiorly at one end with a vertical slot 16 to receive a lug or key 17 on the mandrel 12 so that the mandrel and sleeve are constrained to rotate together. Between the lower end of the mandrel 12 and the interior annular shoulder 18 of the sleeve is positioned a spring 19 which is normally compressed and tends constantly to force the sleeve downwardly relative to the mandrel thereby keeping the point of the mandrel in contact with the work. Near its lower end the sleeve 15 is formed with an annular groove 20, the prongs of the forked lever 21 which is pivoted at 22 extending into this groove and by means of this lever the operator may effect longitudinal movement of the work support 14 at will while the work is rotating.

The means for securing the work to the work-holding platform comprises a ring 23 and a number of pivoted bolts 24 having wing nuts 25 which hold the ring in position to clamp the flange of the shell. A pin 26 extends through the aperture in the flange of the shell and accurately positions the work with the axis of the protuberance aligned with the axis of the mandrel 12.

To form the tubular nose or protuberance the operator manipulates the handle 21 and the usual hand spinning tool while the work is rapidly rotated and spins the same in the well known manner until it lies against the curved surface of the mandrel. The longitudinal motion of the work relative to the arbor or mandrel is continued until the inner end of the sleeve 15 contacts with the screw 27 in a collar 28 longitudinally adjustable on shaft 10, which collar has a set screw 29 to secure it in adjusted position. The positions of the collar 28 and of the screw 27 are adjusted for the particular work being performed.

The design and arrangement of the component parts of the machine may be modified within the scope of the invention, which is not limited to the exact embodiment disclosed.

Having thus described the invention what

I claim as new and desire to secure by Letters Patent is:

1. A device of the class described for spinning a nose on a cup-shaped sheet metal article at an angle to the axis of the article, comprising in combination, a rotatable mandrel, and a work holding platform inclined to the axis of the mandrel and rotatable therewith but longitudinally movable relatively thereto.

2. A device of the class described for spinning a nose on a cup-shaped sheet metal article at an angle to the axis of the article, comprising in combination, a rotatable mandrel, a work holding platform inclined to the axis of the mandrel and rotatable therewith and longitudinally movable relatively thereto, means normally tending to move the work holding platform relatively to the mandrel to keep the work in contact there-

with and manually operable means for moving said work holding platform relatively to the mandrel.

3. A device of the class described, for spinning a nose on a cup-shaped sheet metal article at an angle to the axis of the article, comprising in combination, a rotatable mandrel, a work holding member having a platform inclined to the axis of the mandrel and a sleeve portion surrounding the mandrel and having a key and slot connection thereto so as to be longitudinally movable relatively to the mandrel but constrained to rotate therewith, and means for effecting relative longitudinal movement of said member and mandrel.

In testimony whereof I hereunto affix my signature.

GEORGE E. PAGE.