

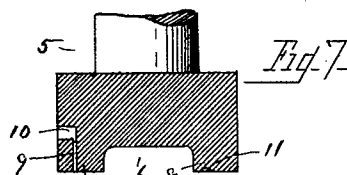
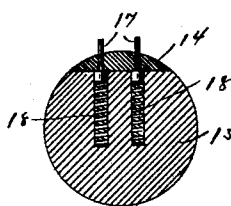
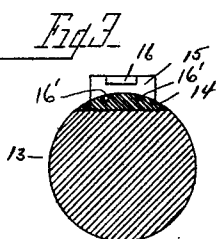
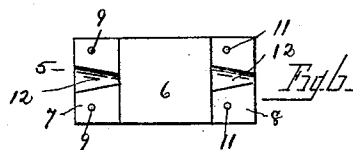
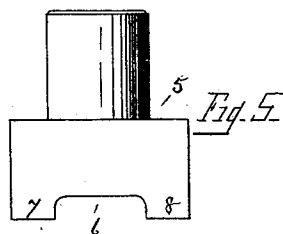
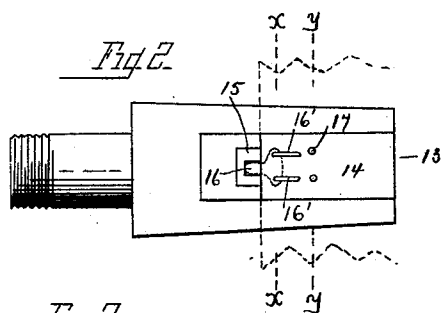
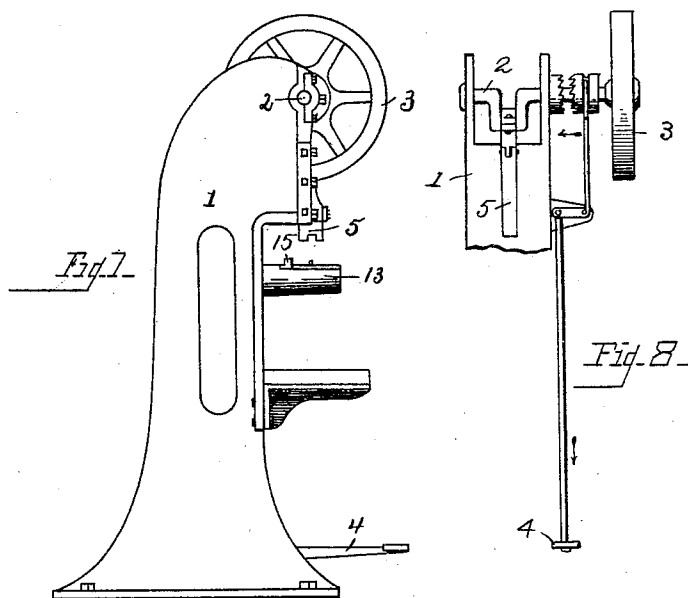
(No Model.)

C. STOLLBERG.

APPARATUS FOR RIVETING EARS UPON BUCKETS.

No. 480,881.

Patented Aug. 16, 1892.



WITNESSES

Carroll J. Webster
Grace C. Lohman

Fig. 4

INVENTOR

Charles Stollberg.
By William Webster
att'y

UNITED STATES PATENT OFFICE.

CHARLES STOLLBERG, OF TOLEDO, OHIO, ASSIGNOR TO THE TOLEDO
TIN-WARE MANUFACTURING COMPANY, OF SAME PLACE.

APPARATUS FOR RIVETING EARS UPON BUCKETS.

SPECIFICATION forming part of Letters Patent No. 480,881, dated August 16, 1892.

Application filed February 8, 1892. Serial No. 420,663. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STOLLBERG, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Apparatus for Riveting Ears Upon Buckets; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to an apparatus for riveting ears upon buckets, and has for its object to render it possible to perform the operation of riveting ears upon buckets mechanically as contradistinguished from the present mode of performing the work manually.

The invention consists in the parts and combinations of parts hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a complete machine. Fig. 2 is a top plan view of the bucket-rest, showing in dotted lines the bucket resting thereon. Fig. 3 is a transverse view on lines *xx*, Fig. 2. Fig. 4 is a like view on lines *yy*. Fig. 5 is a side elevation of the reciprocating die for setting and riveting the rivet. Fig. 6 is a bottom plan view of the same; and Fig. 7 is a sectional elevation of the die, the front side being removed to disclose the channel for receiving the blanks pinched from the ears. Fig. 8 is a front elevation of a portion of the machine.

As is well known, the usual method of securing the ears to buckets is by riveting the same through by hand. This operation, being slow and tedious, adds to the expense of the complete product, and, further, results in producing a large per cent. of imperfectly-riveted buckets. I have overcome these objections by producing a machine in which the ears are riveted to the bucket with greatly-increased rapidity and with a perfection and uniformity that cannot be attained by hand.

1 designates the frame of the machine, in which is journaled a shaft 2, which receives motion from a band-wheel 3, connecting with power by a belt, (not shown,) or the shaft may

be revolved by gearing, if desired. Shaft 2 is provided with the usual clutch, operated by means of foot-lever 4, by which to connect with or disconnect the same from the power, and is also formed with a crank or eccentric—preferably in this instance a crank—to cause the reciprocation of a die 5, connected therewith in any preferred manner.

Die 5 is formed upon the face with a recessed portion 6 and projections 7 and 8, respectively, upon each end, the projection 7 having perforations 9 formed therein—one upon each side—and an opening 10, leading from each to the side of the die, whereby the disks pinched from the bucket or ear, or both, may escape. The opposite portion 8 is formed with two countersinks 11, of a form to shape the riveted end of the rivet either conical or hemispherical, as desired, and each projection is preferably formed with a transverse recess 12 to fit over the corrugation formed in the ear.

13 designates the bucket-rest or anvil, which, as shown, is detachably secured to the frame, although it may be formed integral therewith, if desired, and is located immediately beneath the reciprocating die.

Anvil 13 is formed of metal and provided with a steel face 14, which extends from the front end rearwardly to a projection 15, formed upon the anvil, the projection being formed with the recess 16, into which the front end of the bucket-ear is placed during the operation of riveting. The steel face is formed with two grooves 16', coincident with the holes 9 in projection 7 of the die, each groove being of a width to receive the head of a rivet.

17 designates two spring-pressed gages or stops, which have free play within perforations 18 in the anvil when it is desired to retract the same.

In operation a rivet is placed within each groove 16'. The bucket is then placed upon the anvil, the spring-pressed gages being forced into the perforations 18 by the weight of the bucket, which is moved upon the anvil until the edge of the bucket contacts with projection 15. The ear is then placed upon the bucket, the recess in projection 15 serving as a gage to insure the proper position of the ear. The operator now presses the foot-lever 4, causing the shaft 2 to revolve and actuate

the die, which descends with sufficient force to force the rivets through the metal of the bucket, and also through the ear should it not have been previously punched, the protruding ends of the rivets entering perforations 9 in the die. When the die rises, the bucket is moved forward past the gages or stops, which upon being released are projected by the springs, and the edge of the bucket is pressed against the stops, which causes the rivets to exactly register with the countersinks in the end 8 of the die, which end as it descends upsets the end of the rivet and shapes the riveted end to the form given thereto by the countersink.

It will be seen that the apparatus is simple in construction and that it can be operated without the use of skilled labor, and also that it is capable of performing the work of several operators by the usual mode and with more satisfactory results.

While I have described my automatic riveter as especially adaptable to riveting ears to buckets, I have found the same well adapted to riveting other forms of manufacture of tinware.

What I claim is—

1. In an apparatus for riveting ears upon buckets, an anvil or support having recesses to receive the rivet-heads, spring-pressed projections thereon to limit the movement of the bucket, and a reciprocating die formed with openings upon its face, registering with the recesses in the anvil.

2. In an apparatus for riveting ears upon buckets, an anvil or support for the bucket having a projection to limit the movement of the bucket, a reciprocating die formed with openings upon one end to admit the ends of rivets when forced through the metal, an upsetting device upon the opposite end, and a vertically-movable stop upon the anvil in position when raised to limit the movement of the bucket to cause the rivets to align with the riveter.

3. In an apparatus for riveting ears upon buckets, an anvil formed with recesses to receive the rivet-heads, a gage or stop to limit the movement of the bucket, a projection having a recess to receive and limit the movement of the ear, and a die having means for forcing the rivet through the metal and riveting the same.

4. In an apparatus for riveting the ears upon buckets, an anvil or support having recesses to receive the rivet-heads and a projection to limit the major movement of the bucket, a spring-pressed stop to limit the minor movement of the bucket, and a die having recesses registering with those in the anvil.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

CHARLES STOLLBERG.

Witnesses:

WILLIAM WEBSTER,
CARROLL J. WEBSTER.