No. 642,612. Patented Feb. 6, 1900.

L. P. & F. J. KLEBER.

MACHINE FOR MAKING ARTICLES OF SHEET METAL.

(Application filed May 5, 1899.)

(No Model.)

Fig. 1.

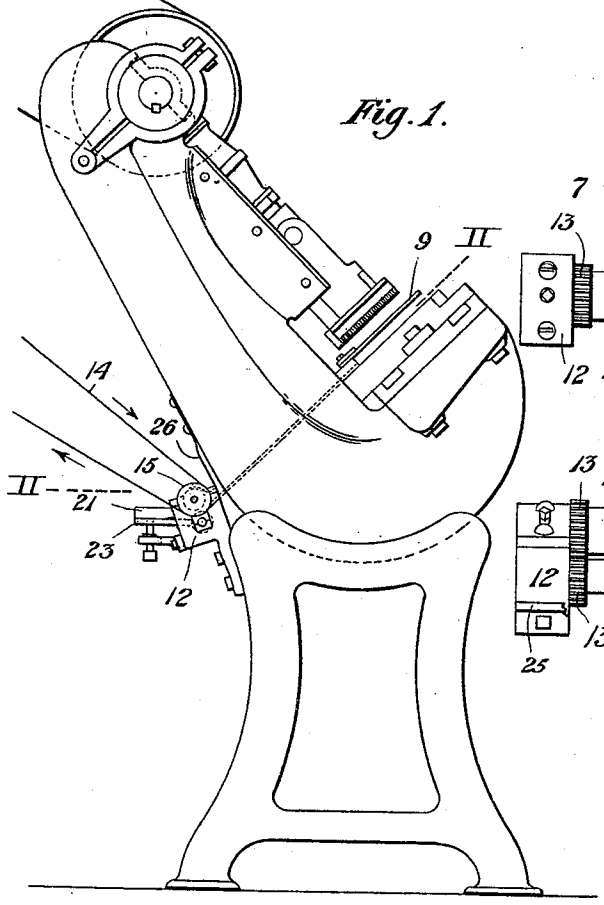


Fig. 3.

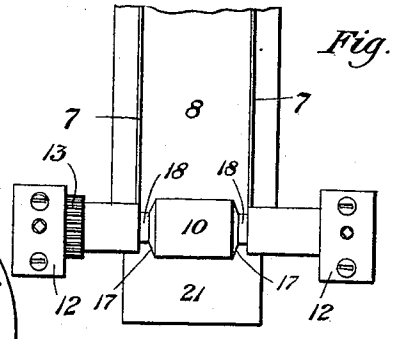


Fig. 5.

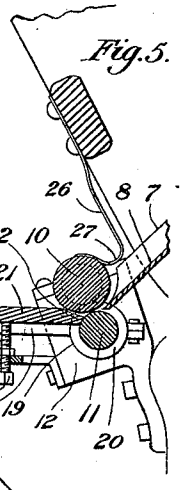


Fig. 4.

Fig. 2.

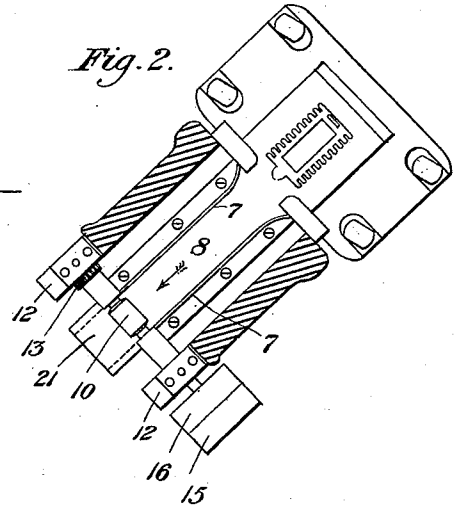


Fig. 6.

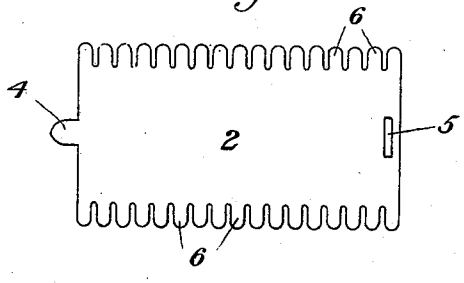
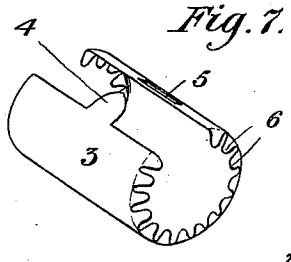


Fig. 7.



Witnesses:
P. F. Edwards
C. C. Butterfield.

Inventors.
Louis P. Kleber
Frank J. Kleber
by C. M. Clarke
their Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LOUIS P. KLEBER AND FRANK J. KLEBER, OF PITTSBURG, PENNSYLVANIA.

MACHINE FOR MAKING ARTICLES OF SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 642,612, dated February 6, 1900.

Application filed May 5, 1899. Serial No. 715,658. (No model.)

To all whom it may concern:

Be it known that we, LOUIS P. KLEBER and FRANK J. KLEBER, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered a new and useful Improvement in Machines for Making Articles of Sheet Metal, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view in side elevation of a stamping-press provided with our improved turning and crimping rolls. Fig. 2 is a cross-sectional view thereof, taken on the line II II of Fig. 1. Fig. 3 is an enlarged detail view in plan of the rolls mounted in the bearings, with the guides leading thereto. Fig. 4 is a view in elevation from the rear of the rolls on an enlarged scale. Fig. 5 is a cross-sectional view through the rolls, indicated by the line V V of Fig. 4, and showing certain other details of construction. Fig. 6 is a plan view of the blank as it is stamped out by the press. Fig. 7 is a perspective view of the finished article as it comes from the rolls.

Our invention relates to improvements in presses for shearing or stamping sheet metal; and it consists in the combination therewith of means for forming the stamped blank into finished shape, as shall be hereinafter described.

In the present instance the press is employed to punch from sheet metal by suitable dies the blank 2, which is subsequently turned and crimped by means of the rolls into the finished coin-holder 3. The dies for this work and the manner in which they are operated are well understood in the art and do not form any part of the present invention, except that they are made to form the blank 2, having the tang 4 and eye 5, with the corrugated or scalloped side projections 6.

We preferably employ a press that is adjustable to an angle in order to allow the blank to fall by gravity toward the rolls after being punched, although this feature may be easily provided for by proper arrangement of the guides. These guides 7 are located on the face of an inclined platform 8, leading downwardly from the die, and into which the blank will slide after being stripped by the plate 9. At the lower end of the platform 8 are located the turning and crimping rolls 10 11, mounted in suitable housings 12, secured to the frame of the press, geared together by pinions 13 and driven by belt 14, running upon tight and loose pulleys 15 16. The upper roll 10 somewhat exceeds the lower roll 11 in diameter, and at each end is provided with inwardly-beveled faces 17 and reduced necks 18 18, while the lower roll 11 is provided with corresponding projecting collars 19 and beveled faces 20 20. Between the rollers and between the beveled faces 17 and 20 is a space through which the blank will pass and in which it will be turned and crimped. At the outer side of the rolls is a deflecting-plate 21, provided with a V-shaped edge 22, which projects into the space between the rolls, bearing on the lower rolls the purpose of which is to guide the blank in its passage and deflect it upwardly. This plate is mounted on arms 23, journaled around the neck of the lower roll 11 outside of the collars 19, and the plate is adjusted to the desired angle by means of a set-screw 24, having a bearing in the bar 25. A thin fender-plate 26 is secured to the frame and projects downwardly and upwardly and over the upper roll, bearing upon its upper face, the purpose of which is to strip the finished article and discharge it, the looped portion 27 of the fender-plate permitting the advancing end to follow around the roll until the last end is released. In its passage through the rolls the main body portion of the blank is turned into the cylindrical form, as shown in Fig. 7, while the side projections 6, passing between the beveled shoulders 17 20, are turned inwardly, such action assisting in causing the blank to assume a cylindrical form. The rolls are provided with means for adjustment toward or from each other and are preferably driven from an outside independent shaft at a comparatively high speed. In operation they produce the finished article from the blank in an entirely automatic and satisfactory manner, and while we have shown and described their use as applied to the particular article we at present manufacture it will be understood that their application within a wider scope is entirely within the ordinary skill of a mechanic, and we do not wish to be confined to

the present particular application, but to include all such changes and variations as come within the claims.

What we claim, and desire to secure by Letters Patent, is—

1. In combination with a stamping-press: an inclined guideway, upper and lower bending-rolls provided with beveled shoulders for receiving the blank from the guideway and forming it into a finished article, a deflecting-plate supported on arms journaled to the neck of the lower roll, and an adjusting-screw therefor adapted to set the deflecting-plate at varying angles with relation to the inclined guideway.

2. In combination with a stamping-press: an inclined guideway, upper and lower bending-rolls provided with beveled shoulders for receiving the blank from the guideway and forming it into a finished article, a deflecting-plate supported on arms journaled to the neck of the lower roll, an adjusting-screw therefor, and a fender-plate secured to the frame of the machine looped downwardly and projecting up over the upper roll, substantially as set forth.

In testimony whereof we have hereunto set our hands.

LOUIS P. KLEBER.
FRANK J. KLEBER.

Witnesses:
PETER J. EDWARDS,
C. M. CLARKE.