

R. H. SMITH.
MANUFACTURE OF SHEET METAL CANS.
APPLICATION FILED AUG. 25, 1908.

932,341.

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Fig. 1.

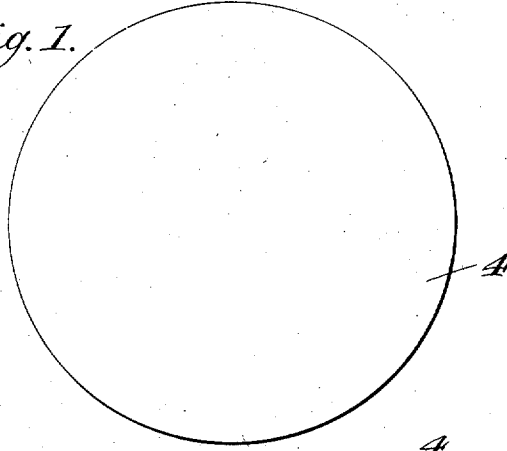


Fig. 2.

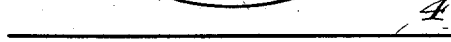


Fig. 3.

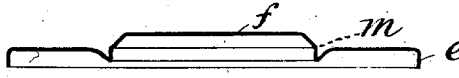


Fig. 4.

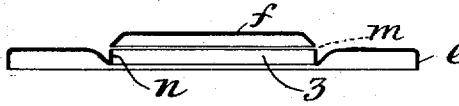


Fig. 5.

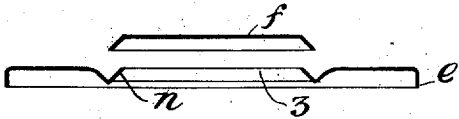


Fig. 6.

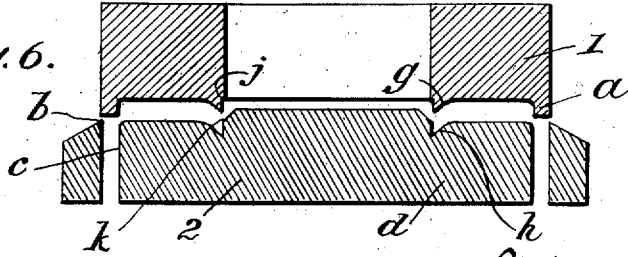
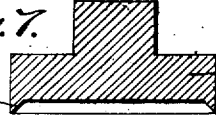


Fig. 7.



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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF SHEET-METAL CANS.

932,341.

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To all whom it may concern:

Be it known that I, RICHARD HENRY SMITH, of the city of Baltimore, State of Maryland, whose P. O. address is 1319 Edmonson avenue, have invented certain Improvements in the Manufacture of Sheet-Metal Cans, of which the following is a specification.

The object of the present invention, in common with others of its class, is to utilize the disk or portion of the metal stamped from the can head to produce the filling aperture of the can, as the cap which is adapted to be soldered over the said aperture to close the same, as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to the accompanying drawing forming a part hereof, and in which,

Figure 1 is a top or flat view of the blank from which the can head and cap are formed, and Fig. 2 a cross section of the same. Fig. 3 shows the head at the conclusion of the first step in its manufacture, and Fig. 4 the same with the cap detached from the head. Fig. 5 shows the head, as it appears in the final stage of its manufacture, together with the cap which is placed over the filling aperture and slightly elevated above the head. Fig. 6 is a cross section of the punch and die whereby the flat blank is brought to the condition illustrated in Fig. 4, and Fig. 7 a cross section of the tool whereby the portion of the head which surrounds the filling aperture, is changed in position or to the shape shown in Fig. 5.

Referring now to the drawing 1 is the punch, 2 the die, and *a* an annular lip at the circumference of the punch, which in connection with the cutting edge *b* of the die produces from the blank the circular disk 4 shown in Fig. 1. The inner circumference of the lip *a* in connection with the annular face *c* on the central block *d* of the die, forms the flange *e* of the can head.

The upper surface of the central block *d* of the die has a configuration corresponding with that to be produced in the head and cap, as shown in Fig. 3; the annulus *g* on the

lower side of the punch serving to press the sheet metal into the annular groove *h* in the die, and bring the cap *f* into the shape illustrated in Fig. 3. Immediately above the annulus *g* is a circular cutting edge *j* which upon the punch reaching its extreme downward movement, comes practically into contact with the edge *k* of the die and severs the cap from the head at *m*.

By reference to Fig. 4 it will be seen that the lip *n* which surrounds the filling aperture 3, is vertical and of the same diameter as the lower edge of the cap, and therefore not adapted to receive that device, I therefore, in a subsequent operation employ the tool 5 which is provided with an inclined inner surface *o* of the proper diameter and depth, and upon being forced over the said vertical lip causes the same to be deflected angularly inward and made to take the shape shown in Fig. 5, thereby adapting it to receive the cap.

From the foregoing description it will be understood that in a single operation of the punch which consists in a downward motion toward the die, the cap is not only correctly formed but cut from the head, and that in the second operation effected by the tool 5 the lip *n* is adapted to receive the cap.

I claim as my invention,

The improvement in the manufacture of sheet-metal cans whereby the disk punched from the head in forming the filling aperture is adapted as a cap to close the same, which consists in stamping or drawing on the can head, a projection having a cap-shaped crown, and below the said crown an annular crease and at the same operation cutting the crown from the said projection to form a cap, and then drawing or bending inward the annular lip left in the separation therefrom of the cap, and that independently of the head adjacent thereto, whereby the said lip is adapted to receive the cap, substantially as specified.

RICHARD HENRY SMITH.

Witnesses:

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