

No. 651,884.

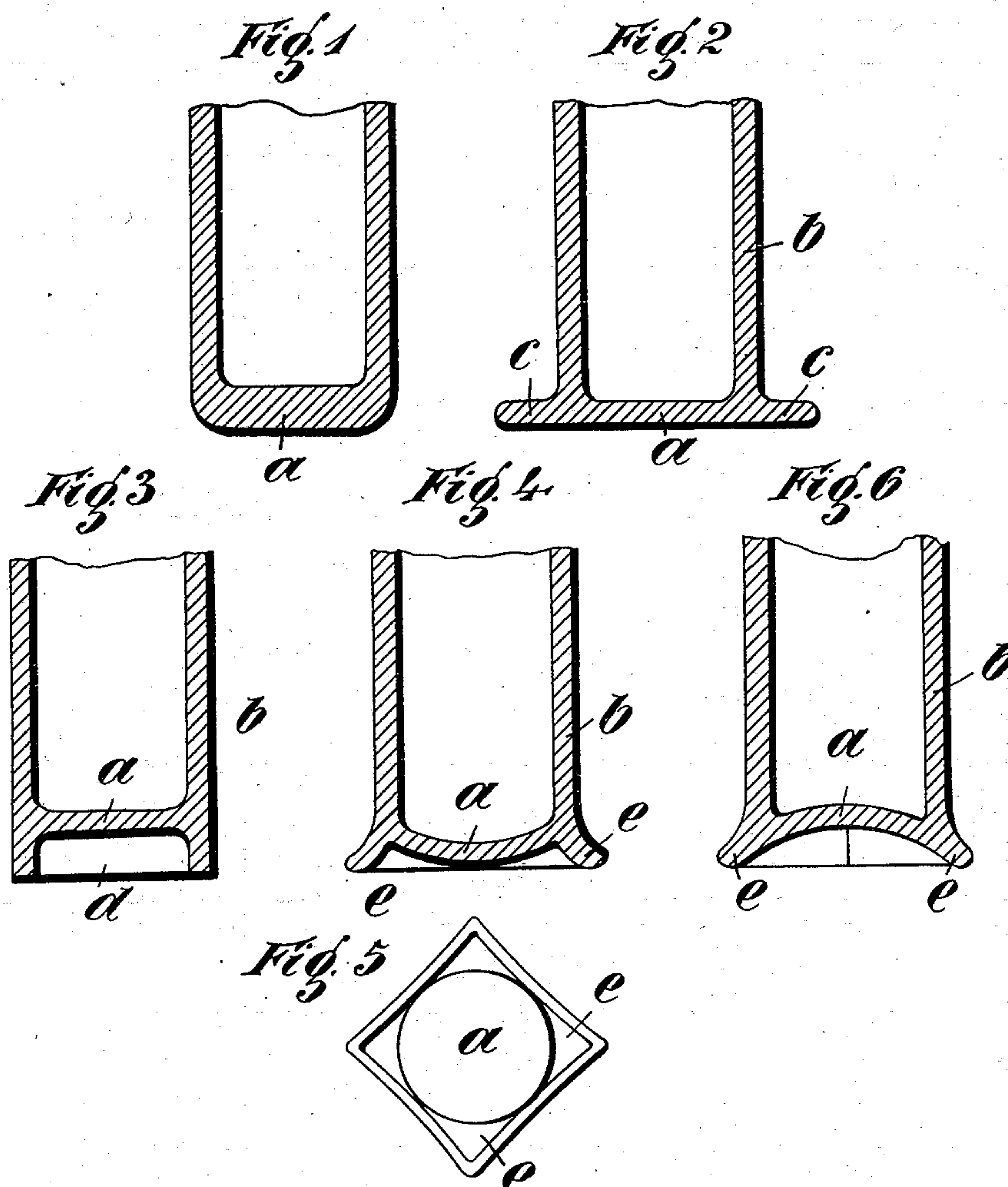
Patented June 19, 1900.

H. PLATZ.

RECEPTACLE FOR GASES, &c., AND PROCESS OF MANUFACTURING SAME.

(Application filed Feb. 17, 1900.)

(No Model.)



Witnesses,

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UNITED STATES PATENT OFFICE.

HERMANN PLATZ, OF CARLSRUHE, GERMANY.

RECEPTACLE FOR GASES, &c., AND PROCESS OF MANUFACTURING SAME.

SPECIFICATION forming part of Letters Patent No. 651,884, dated June 19, 1900.

Application filed February 17, 1900. Serial No. 5,812. (No model.)

To all whom it may concern:

Be it known that I, HERMANN PLATZ, a subject of the Grand Duke of Baden, residing at Carlsruhe, in the Grand Duchy of Baden, in the German Empire, have invented certain new and useful Improvements in the Manufacture of Seamless Metal Bottles, of which the following is a specification.

The invention involves an improved manufacture of seamless bottles or receptacles for containing compressed gases and the like, whereby such bottles are provided each with an efficient and tasty-appearing foot or base, formed in one piece with the walls and bottom of the bottle. The process of manufacture for this purpose consists in, first, partially shaping by suitable means the lower portion of a metal bottle and providing an excess of metal in the bottom; second, spreading such thick bottom by hydraulic pressure or by hammering, so as to form a projecting flange extending around the same and integral therewith; third, bending such flange by means of dies or otherwise in such a manner that an inverted-cup-like recess is formed underneath, and, fourth, shaping by suitable dies or stamps. Toward its lower edge it assumes a square or other desired angular form to produce a foot which will afford the bottle an efficient and elegant support when standing upright and that will prevent the bottle from rolling away when lying down. The bottle may by the same series of operations have the required bulge, either outward or inward, imparted to its bottom. If preferred, this may be effected beforehand.

In order to make my invention more clear, I refer to the accompanying drawings, in which similar letters denote similar parts throughout the several views, and in which—

Figure 1 shows the lower part of the drawn-metal bottle with its thick bottom. Fig. 2 shows the same bottle after its bottom has been worked by suitable means, (not shown,) so as to produce the projecting flange thereon. The means referred to may be swaging-dies similar to those employed in some cases for forming the flanges on cartridge-shells.

Fig. 3 shows the flange bent down, so as to produce a cup-shaped hollow. Fig. 4 shows the final form imparted to the base or foot of the bottle. Fig. 5 shows an under side plan of the foot at Fig. 4; and Fig. 6 shows a modification. It is a bottle mainly similar, but with its bottom bulge inward instead of outward.

According to the present invention a metal bottle is first formed in a known manner with a comparatively-thick bottom *a*, Fig. 1. The bottom is afterward spread by ordinary means, as strong pressure or percussion, or both, so that a flange *c*, Fig. 2, projecting from and integral with the bottle, is produced. This flange is next bent downward to form an inverted cup *d*, Fig. 3, the sides of which form continuations of the sides of the bottle. This cup is then widened out at its lower part by a suitably shaped stamp or die, (not shown,) so as to induce a square or other angular form, while at the same time the bottom *a* is bulged, either outward or inward, thus producing a foot or base *e* of the form shown in Figs. 4 and 5 or 6.

One arrangement of means for producing the square outline consists of employing a series of square mandrels, each tapered and adapted to enter the hollow presented by the base-flange and at each operation pressing on the exterior of the latter by laterally-operating formers to conform to the mandrel.

Having now described my invention, what I desire to secure by Letters Patent of the United States is—

1. The process of manufacturing metal bottles or receptacles for compressed gases and the like, having a foot or base formed in one piece with the sides and bottom, the said foot being produced by first making a bottle with a thick bottom, then spreading such bottom out to form a flange, then bending such flange to a cup shape and lastly, shaping such cup by suitable stamps or dies so as to produce an efficient and graceful foot, all substantially as herein described.

2. As a new article of manufacture, a metal bottle for compressed gases and the like, said

bottle having a foot or support consisting of
a downwardly-extended flange in one piece
with the sides and bottom of the bottle, said
flange being of angular configuration, and
5 extending outward beyond the contour of the
body so as to afford an extended base and
prevent rolling, substantially as described.

In witness whereof I have hereunto set my
hand in presence of two witnesses.

HERMANN PLATZ.

Witnesses:

GUSTAV TAUBE,
WOLDEMAR HAUPT.