

No. 682,799.

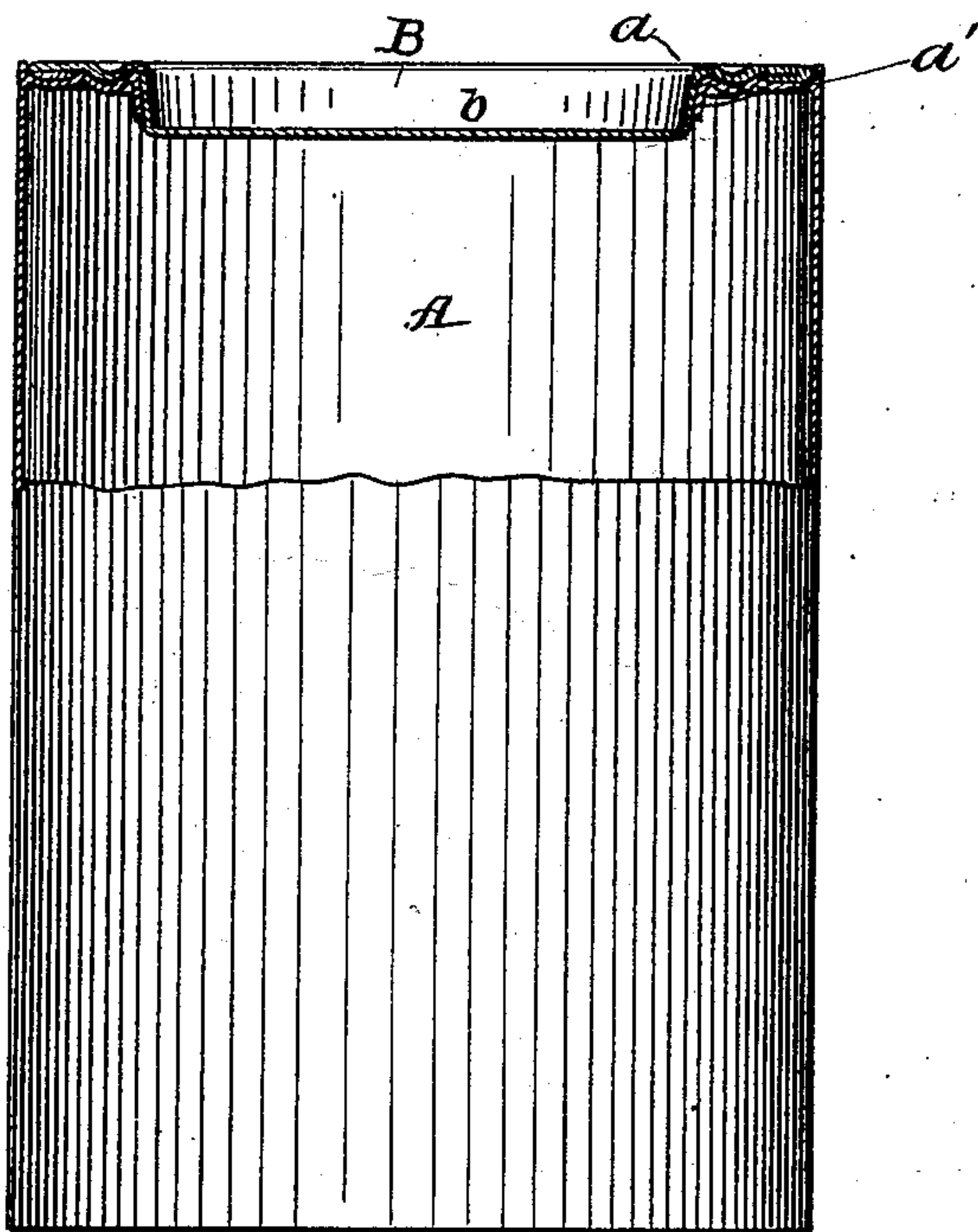
Patented Sept. 17, 1901.

R. C. HOPKINS.
SHEET METAL RECEPTACLE.

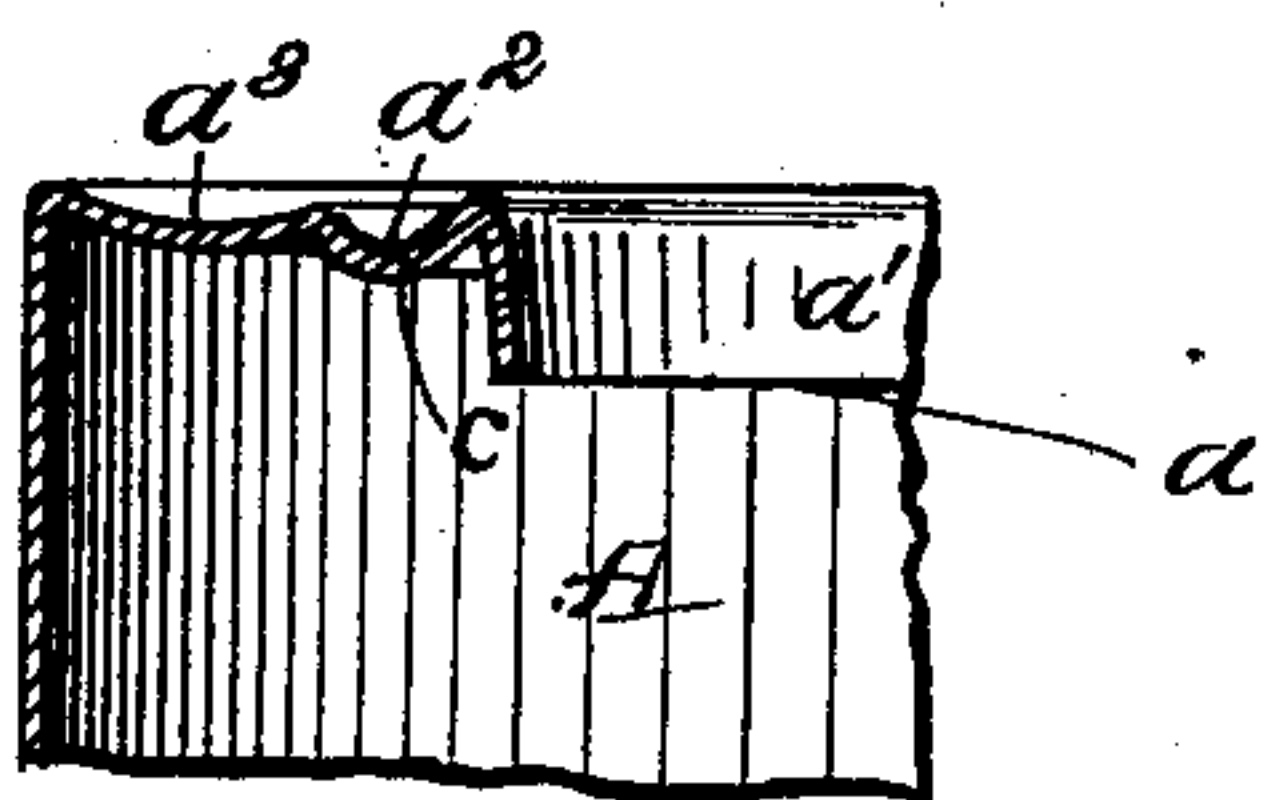
(Application filed Aug. 29, 1900.)

(No Model.)

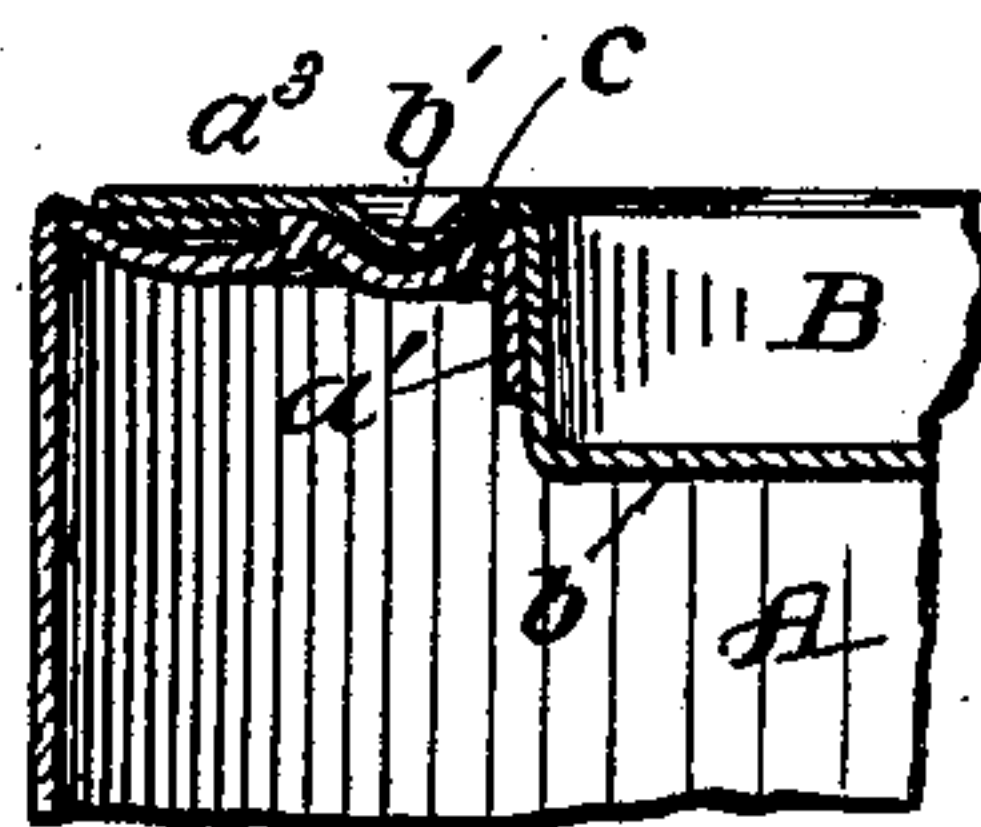
-FIG. I-



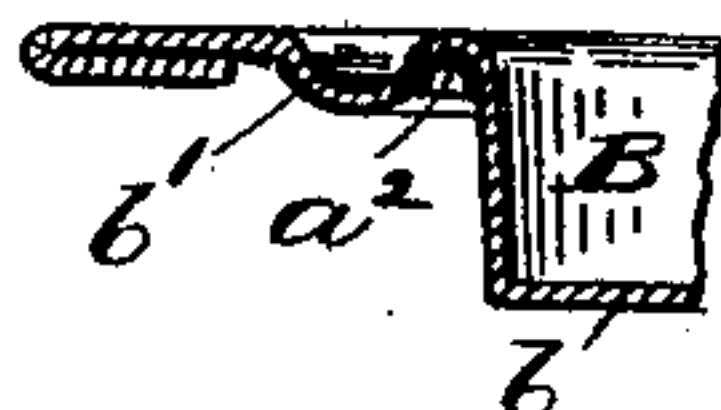
-FIG. II-



-FIG. III-



-FIG. IV-



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UNITED STATES PATENT OFFICE.

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SHEET-METAL RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 682,799, dated September 17, 1901.

Application filed August 29, 1900. Serial No. 28,392. (No model.)

To all whom it may concern:

Be it known that I, RANDOLPH C. HOPKINS, a citizen of the United States, and a resident of Glenville, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Sheet-Metal Receptacles, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to air-tight joints formed between sheet-metal receptacles and their covers, such as are used in paint-cans and the like; and it consists of means hereinafter described.

The annexed drawings and the following description set forth in detail one mode of carrying out my invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a partial axial sectional view of a paint-can embodying my invention, and Figs. II and III represent enlarged detail views of the joint made by the can and cover therefor. Fig. IV represents a detailed view illustrating a modified form of the invention.

The can A is provided with a centrally-disposed and circular opening a , whose outer edge or wall is bounded by a downwardly-projecting flange a' , inclining slightly toward the can's axis, as shown in Fig. II. Contiguous to said opening is formed an inwardly-extending groove a^2 , intermediate of the outer edge of the top of the can and the outer edge of the opening a . The concave surface of said groove is provided with a coating c of adherent semisolid material, one form of such material being a combination, in suitable proportions, of glue, glycerin, water, and molasses. Intermediate of the outer edge of said groove and the outer edge of the can's top is formed a second or outer annular groove a^3 , as shown in Fig. II.

The can-top B is provided with a central inwardly-extending cylindrical portion b , having an outer diameter slightly greater than the smallest inner diameter of the flange a' . Intermediately of the outer edge of said

top and the outer edge of said depressed portion b is formed an inwardly-extending circular bead b' , adapted to project into the groove a^2 . The metal of the outer edge portion of the cover B is bent so as to cause the free edge thereof to lie beneath the under surface of the cover, (shown in Fig. III,) forming an annular and downwardly-projecting portion, as shown in Fig. III. The outer diameter of said cover is such as to cause such projecting portion to seat itself in the groove a^3 , thereby permitting the top of the can and the upper surface of the cover to lie substantially flush or in the same plane and the metal of the cover contiguous to the bead b' to contact the metal on each side of the groove a^2 , thus contributing to the non-leaking qualities of the joint and also giving a smooth and uninterrupted appearance to the top of the can. The bead b' , projecting into the groove a^2 , is pressed into the semisolid coating, thereby making an air-tight joint. The diameters of the downwardly-depressed portion b of the cover and of the downwardly-projecting flange a' produce a secure engagement of the cover with the can, as well as contributing toward the prevention of leakage of liquids from said can.

The above-described construction may be modified by applying the adherent semisolid material to the end surface of the cover and upon the concave surface of the groove b^2 formed between the central inwardly-extending cylindrical portion b and the circular bead b' , as is illustrated in Fig. IV, a result being thus obtained similar to that produced by the first-described construction.

The adherent semisolid material, consisting of glue, glycerin, water, and molasses, is particularly adapted for use in receptacles designed for containing paints, the characteristics of such material being such as to withstand the chemical action of constituent parts of such paint. Such material may be replaced by other substance having similar physical properties adapted to withstand the action of water—as, for example, soft rubber—thus making the receptacle suitable for use in the preservation of fruits or other substances containing water.

Other modes of applying the principle of

my invention may be employed instead of the one explained, change being made as regards the means herein disclosed, provided the means covered by any one of the following
5 claims be employed.

I therefore particularly point out and distinctly claim as my invention—

1. The combination with a sheet-metal receptacle having a central circular opening,
10 an inwardly-extending inner annular groove intermediate of said opening and the outer receptacle edge, and contiguous to said opening, and a second such groove intermediate
15 of and parallel with said first-named groove; of a cover formed of a single sheet of material and lying substantially flush with said receptacle edge and provided with a peripheral bead adapted to cover and project into said
20 inner groove, the outer edge portion of said cover adapted to project into said second groove, the surface of said inner groove provided with a coating of adherent semisolid material, substantially as set forth.

2. The combination with a sheet-metal receptacle having an opening the wall of which
25 extends downward and is inclined inwardly, said receptacle being provided with two concentric inwardly-extending grooves, said grooves lying between the opening and the
30 receptacle edge, the inner groove being contiguous to said opening, and provided with a coating of adherent semisolid material, and a non-flexible cover having a downwardly-projecting portion for frictionally engaging said
35 wall and having a peripheral bead adapted to cover and project into said inner groove, said bead being of a width sufficient to project into the outer groove, the top surface of
40 said cover and the receptacle edge being substantially flush.

Signed by me this 18th day of August, 1900.

RANDOLPH C. HOPKINS.

Witnesses:

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