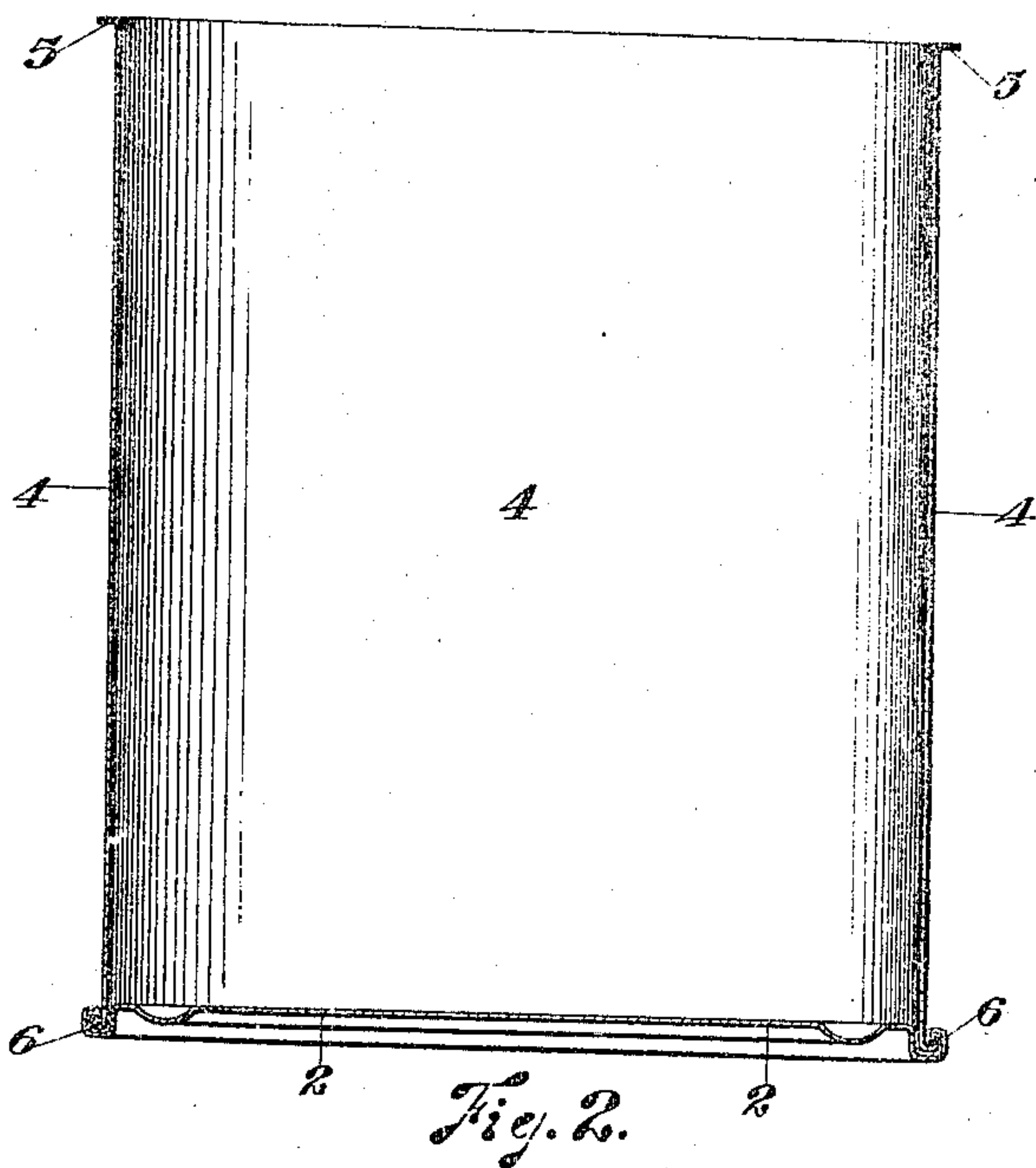


J. J. GRIFFIN.
AIR TIGHT JOINT FOR TINS CONTAINING ALIMENTARY AND OTHER SUBSTANCES.
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987,572. Patented Mar. 21, 1911.



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UNITED STATES PATENT OFFICE.

JAMES JOSEPH GRIFFIN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF
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AIR-TIGHT JOINT FOR TINS CONTAINING ALIMENTARY AND OTHER SUBSTANCES.

987,572.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES JOSEPH GRIFFIN, a citizen of the United States of America, whose post-office address in the United States is 1131 Shotwell street, San Francisco, in the State of California, United States of America, but who am temporarily residing at 1 Garden street, South Yarra, a suburb of the city of Melbourne, in the county of Bourke, State of Victoria, Commonwealth of Australia, have invented certain new and useful Improvements in Air-Tight Joints for Tins Containing Alimentary or other Substances, of which the following is a specification.

This invention is an improved process of hermetically sealing tins and the like, particularly those tins each of which comprises a cylindrical body having a circumferential flange at both ends; the top and bottom closing disks of such tins are each usually provided with a circumferential annular recess adapted to engage with the related circumferential flange upon the tin body. In tins of this kind it is necessary to make an air tight joint between the tin body and the top and bottom closing disks, more especially when the tins are used as containers for alimentary substances.

Hitherto asbestos, gutta percha, rubber, and other substances in solution have been used to effect air tight joints, but these have either been objectionable, or too costly in application.

The object of this invention is to insure a reliable air tight joint between the tin and disks, which will be of low cost, can be cheaply and easily formed, does not deleteriously affect the contents of the tin, is sanitary and which does not require particular care and attention during the manufacturing operations. The closing disks treated according to this invention may, in addition, be stored until used without being liable to easy injury.

I will describe the invention with reference to the accompanying sheet of drawings wherein—

Figure 1 represents a sectional view of one of the usual closing disks; and Fig. 2 is a sectional view of a common tin equipped with such a closing disk at its bottom.

In said drawings 2 represents a closing disk having an annular marginal flange or recess 3; 4 is the body of the tin having a

top circumferential flange 5 and a bottom circumferential flange 6. A closing disk 2 is applied to the top, and also to the bottom of the body aforesaid.

In carrying the invention into effect, before application of a closing disk to the body, the annular recess in the flange or margin of the disk is moistened in any desirable way. This may be with an agglutinant such as flour and warm water. Resin in a dry powdered state is then applied to the moistened portion in any suitable manner. The closing disk so treated is then submitted to heat, for example a gas flame, to expel all moisture, and in some degree sterilize the whole of the applied matter and fuse the resin so that a thin resin film or coating is formed in and adheres to the walls of the annular recess in the disk. All closing disks are so treated before being attached to the bodies of the tins.

Powdered resin is used as described for the purpose of obtaining as light or thin a film as possible to permit of effective application of the closing disks to the tin bodies. The resinous coating or film on cooling will set and adhere to the disk. Preferably the heat applied is not sufficient to actually liquefy the resin as that material, if rendered fluid, has a tendency to eventually become brittle leading to its misplacement during application of the disks to the bodies of the tins. But the heat is sufficient to render the resin plastic or viscid.

It will be evident that such a prepared closing disk need not be applied to the body of a tin while the resin is in a still viscid state through the heating, though it may be if desired. The resin can be permitted to cool (when the treated disks for instance are to be stored) and after the application of a prepared closing disk to a tin body at a later date, the heat of the substance placed in the tin will reduce the resin to a glutinous condition. If the tin be filled with cold substances, the tin may be passed open topped through an exhaust box or other heating agency after which a prepared disk may be applied to close the top, and then warmed in any suitable way so as to cause the resin to seal the joint.

What I claim is:

1. The herein described process of hermetically sealing tins and the like, consisting in moistening the portion of the sealing

- disk which engages the tin; applying powdered resin to said moistened portion and heating the same sufficiently to form a thin coating of resin thereon; letting the disk cool to set the resin; applying the coated disk to the tin and locking the same thereto; and finally subjecting the joint between the disk and tin to sufficient heat to cause the resin to fuse and air-tightly seal the joint.
- 10 2. The herein described process of hermetically sealing flanged tins and the like, consisting in first moistening the flanged portion of the sealing disk which engages the flange of the tin with an agglutinant;
- 15 second applying powdered resin to said moistened portion; third subjecting the disk to sufficient heat to cause the resin to form a thin coating on the flange and letting the disk cool to set the resin; fourth applying the disk to the tin and locking the flanges together as usual; and finally subjecting the flanged joint to sufficient heat to cause the resin to fuse and seal the joint between the disk and tin.
- In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.
- JAMES JOSEPH GRIFFIN.
- Witnesses:
CECIL J. SLASTRIER,
GEORGE A. McREN.