

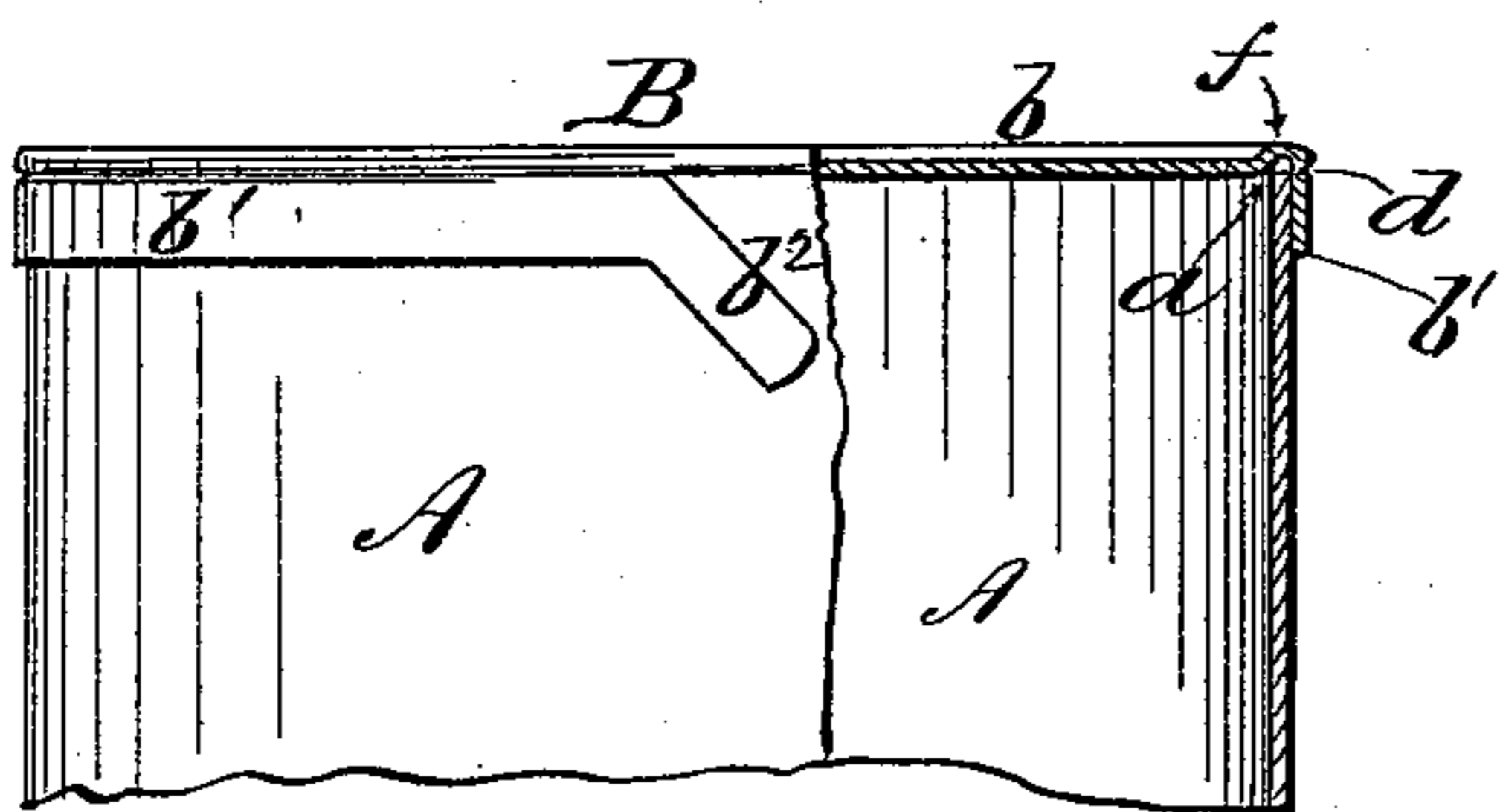
(No Model.)

O. S. FELLOWS.  
SEALED PACKAGE.

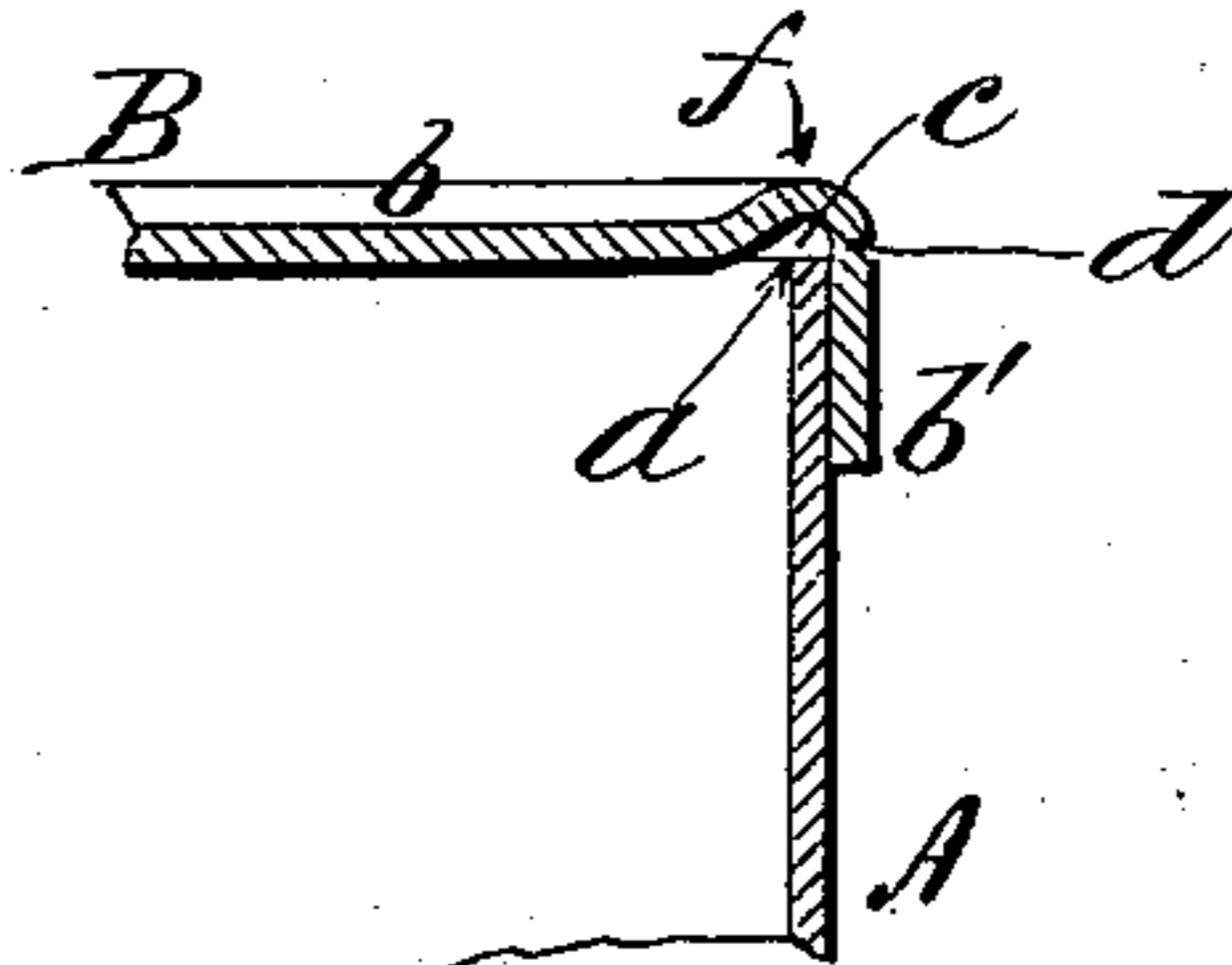
No. 545,465.

Patented Sept. 3, 1895.

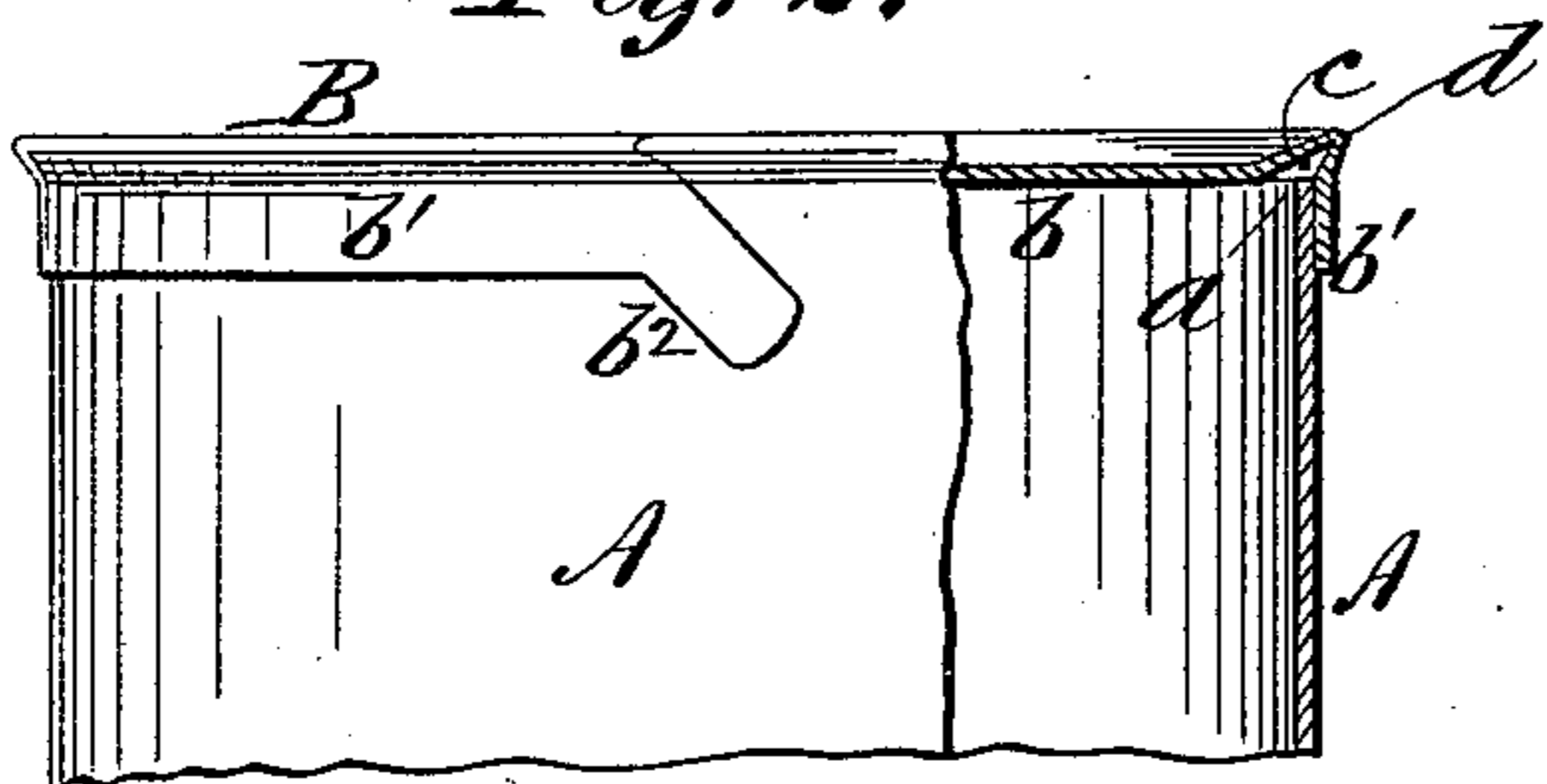
*Fig. 1.*



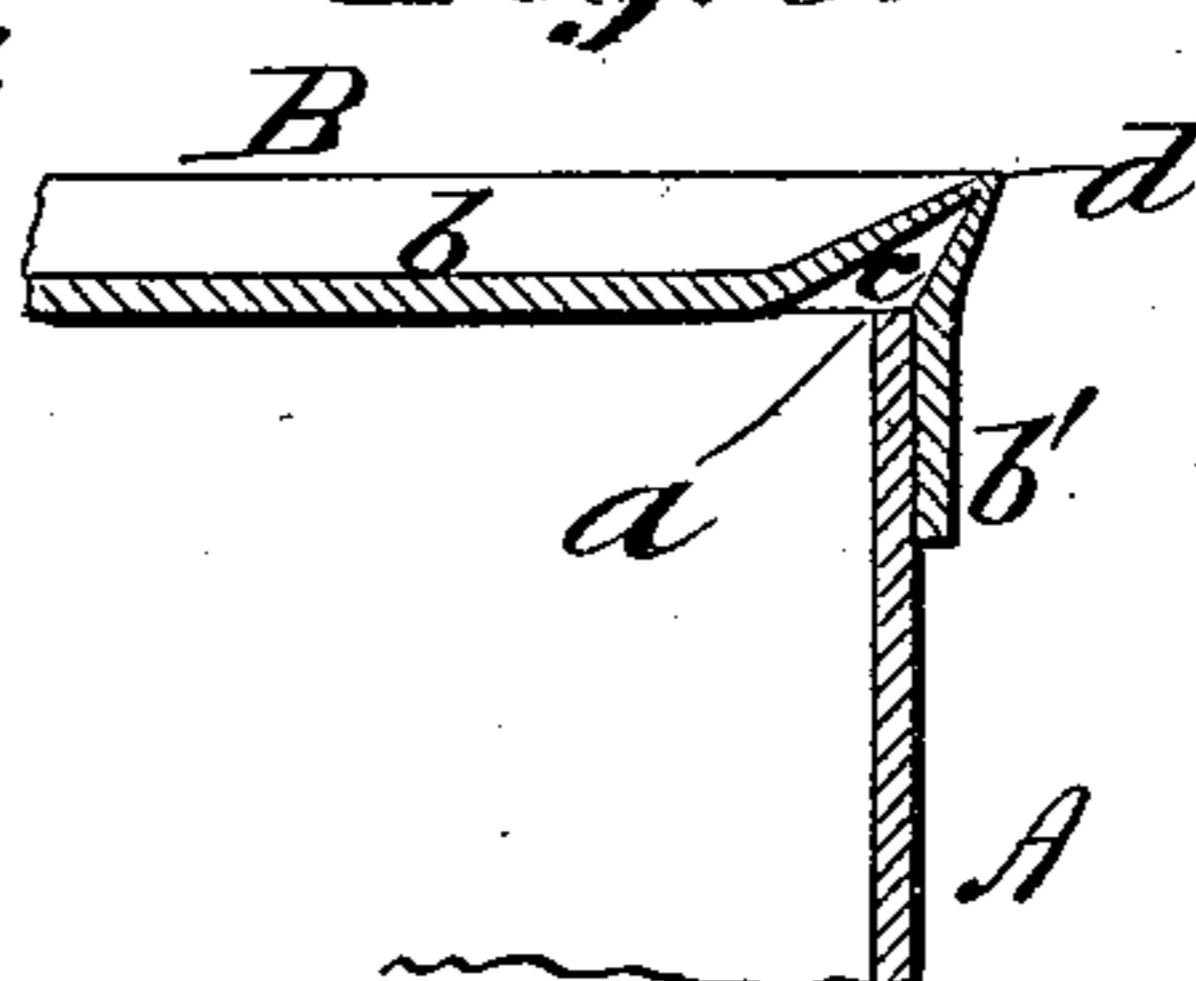
*Fig. 4.*



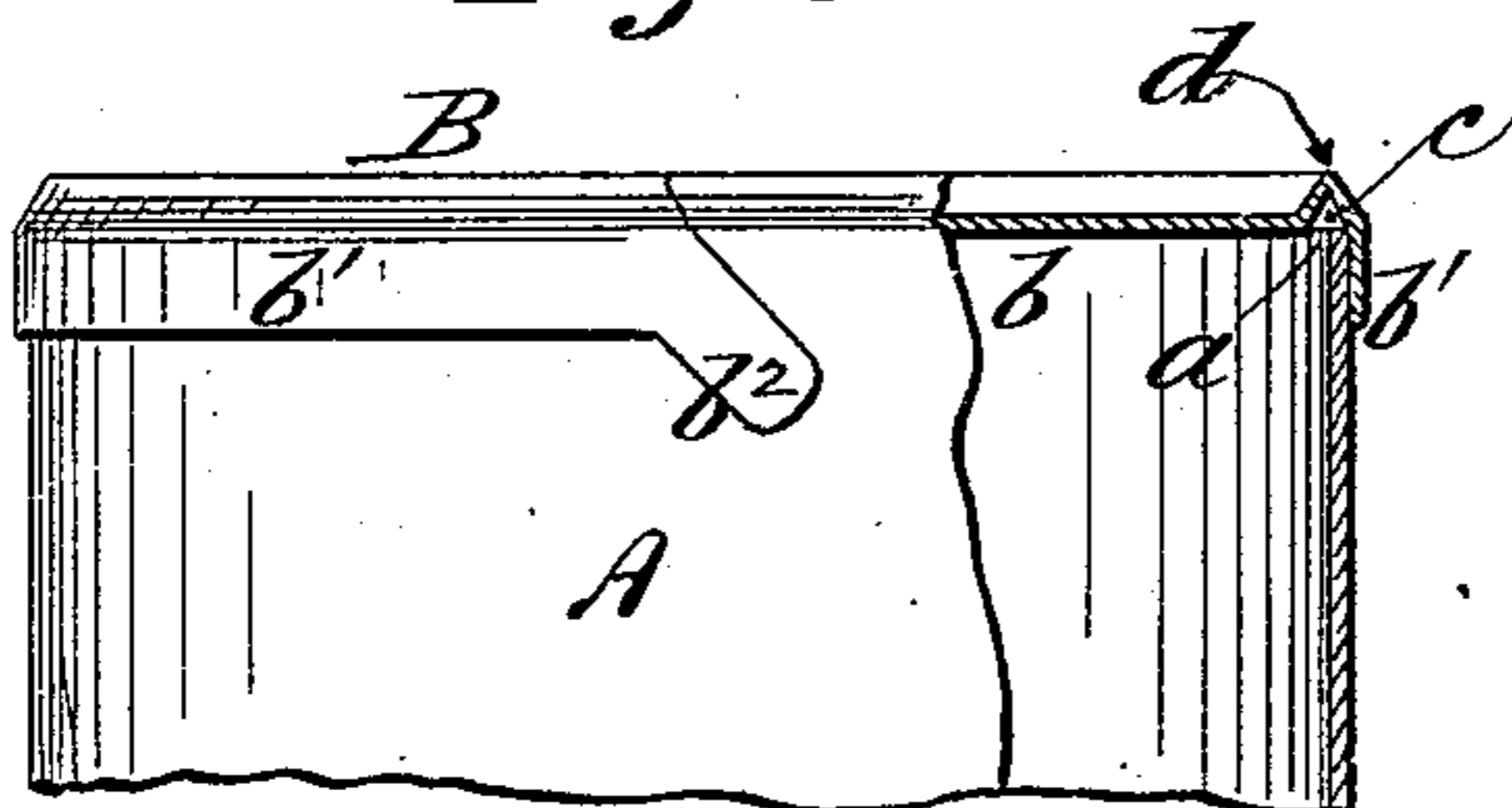
*Fig. 2.*



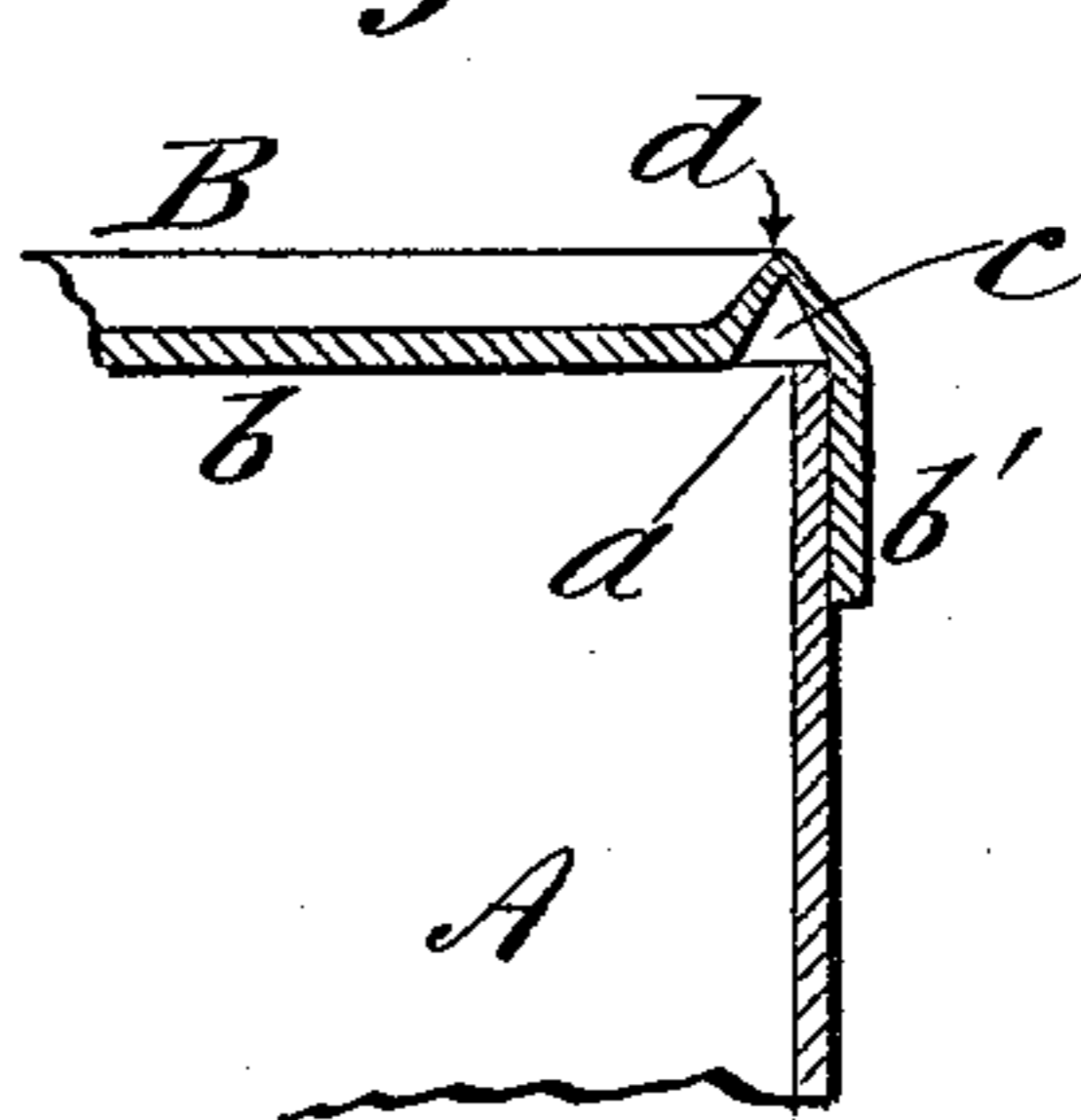
*Fig. 5.*



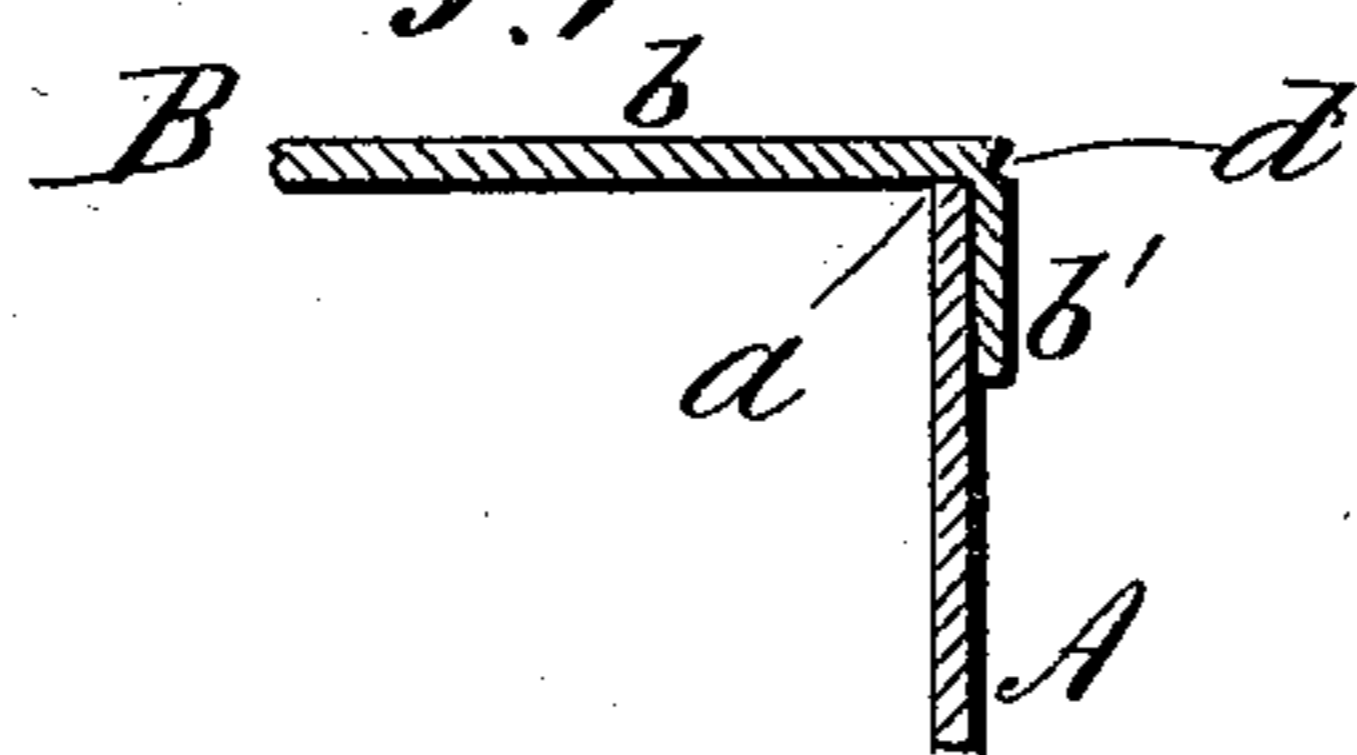
*Fig. 3.*



*Fig. 6.*



*Fig. 7.*



Witnesses:

Edw. M. Mott  
G. J. Mott

Inventor:

Olin S. Fellows  
By his Attorney,  
George William Mott

# UNITED STATES PATENT OFFICE.

OLIN STEPHEN FELLOWS, OF MIDDLETOWN, NEW YORK.

## SEALED PACKAGE.

SPECIFICATION forming part of Letters Patent No. 545,465, dated September 3, 1895.

Application filed October 18, 1894. Serial No. 526,254. (No model.)

*To all whom it may concern:*

Be it known that I, OLIN STEPHEN FELLOWS, a citizen of the United States, residing at Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Sealed Packages, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My invention relates to metal cans, &c., in which the flange of one end cap is designed to be stripped from the can-body in order to open the can by detaching or partially detaching the end plate.

I am aware that it has been proposed to make a circumscribing incision in the end cap at the angle of the flange and coinciding in position with the edge of the can-body to facilitate the stripping off of the flange; but that method is practically defective and unreliable, owing to the fact that the solder, following the metallic contact between the flange and can-body, is apt to fasten the end plate of the cap more or less firmly to the extreme edge of the can-body. Under these circumstances the stripping of the flange only renders the opening of the can more inconvenient and difficult to accomplish. If the interior surface of the end plate is raised above or beyond the edge of the can-body to avoid the above objection, the can is rendered comparatively useless for the packing and transportation of fluids or semi-fluids, since it cannot be filled to its capacity without overflowing when opened.

I overcome both the above-named difficulties by, and my invention consists in, forming the end cap with a circumscribing interior groove between the end plate and the flange thereof, whereby the end plate is made to occupy substantially the same plane as that of the edge of the can-body, while the groove prevents the soldering of the edges of the can-body to the end plate and facilitates the stripping off of the flange from the end of the can-body and from the end plate by reason of a circumscribing reduction in thickness in the cap coinciding with the said interior groove.

In the accompanying drawings, Figures 1, 2,

and 3 represent sectional elevations of the upper portions of a sheet-metal can, showing modifications in the form of my improved sealing and stripping joint. Figs. 4, 5, and 6 are enlarged sectional views illustrating more clearly the construction shown in the first three figures. Fig. 7 is a sectional view illustrating the old method of sealing, upon which my invention is an improvement.

The body of the can A, a portion only of which is shown, may be of any desired form or construction, that shown in the drawings being presumably cylindrical. The plate *b* of the cap B is formed with the exterior flange *b'*.

When the cap is applied and the can passed through the soldering-machine or bath, the solder insinuates itself rapidly between the opposed surfaces of the exterior of the can-body on one side and the interior of the flange on the other, these surfaces being to all intents and purposes practically in contact with each other, and the flow of solder being certain between metallic surfaces which are thus close together. Hence, where the extreme end or edge *a* of the can-body abuts against the inner surface of the end plate *b* of the cap B, as in Fig. 7, the solder is drawn in by the contact, the plate *b* is soldered directly to the edge *a* of the can-body, and the stripping off of the flange does not unseal the package so as to give ready access to its contents. Thus, if the solder reaches the edge of the can-body an incision or reduction in thickness formed in the cap at the angle between the body or plate *b* and the flange *b'* of the cap is found to be of no practical value commercially. In fact, actual test has demonstrated that it is worse than useless, since the stripping of the flange leaves the plate of the cap attached to the end of the can-body A in such shape that it is difficult if not dangerous to effect the removal or partial removal of the end plate in order to gain access to the interior of the can. Where the flange is thus stripped from the edge of the can-body, it is obvious that the height of the latter will be the limit of capacity of the can when opened. Hence to situate the end plate of the cap above or beyond the edge of the can-body would be a serious objection for certain purposes or uses, as in the packing and trans-

portation of condensed milk, canned fruits in liquor, &c. As a result of investigation and experiment, I have devised means of overcoming the difficulties above referred to and of rendering the opening of the can by the stripping of the flange positive and effective, and without danger to the contents or any portion thereof.

The essential feature of construction in a can made according to my invention consists in forming the can-cap B with the circumscribing groove *c* between the end plate *b* and its flange *b'*, and in making the circumscribing incision or reduction in thickness *d* coincident with said groove. Thus the end plate *b* limits the capacity of the can to the height of the can-body, and the parts are soldered together only between the inner side of the flange and the exterior side of the can-body A, and when the flange is stripped from the can-body the edge of the latter is exposed free and clear and no prying off of the plate is necessary; neither is there an overflow of the contents of the can. The stripping of the flange *b'* is effected in any convenient or well-known manner, as by a twisting key or lever applied to the tongue *b<sup>2</sup>*, (shown in the first three figures of the drawings,) as is commonly done, or by other suitable means.

It is obvious that the means for effecting the circumscribing reduction in thickness in the cap B is of secondary importance. It may be accomplished by a circumscribing incision in either the exterior or interior of the cap or by upsetting or pinching the metal circum-

ferentially to facilitate the severance or stripping of the flange.

In Figs. 1 and 4 an incision *d* is made in the exterior surface coinciding with the groove *c* in the bead *f*; in Figs. 2 and 5 the circumscribing groove *c*, as well as the circumscribing reduction in thickness *d*, are formed by pinching up the metal between the flange *b'* and the end plate *b*, while in Figs. 3 and 6 the same result is attained either by interior incision or exterior pinching, or by both means in conjunction.

What I claim as my invention, and desire to secure by Letters Patent, is—

A sheet metal can formed with an end cap having an exterior flange fitting over the end of the can body to which it is soldered, said cap being bent between its flange and its end plate to form a circumscribing concave interior groove above the end of the can body when the end plate is in substantially the same plane as that of the edge of the can body, and a circumscribing reduction in thickness in the cap at or above the edge of the can body and coinciding with said interior groove, for the purpose of preventing the soldering of the end plate to the edge of the can body, and of adapting the can thus capped to contain fluids or semi-fluids by limiting the capacity thereof to the height of the can body substantially in the manner set forth.

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Witnesses:

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