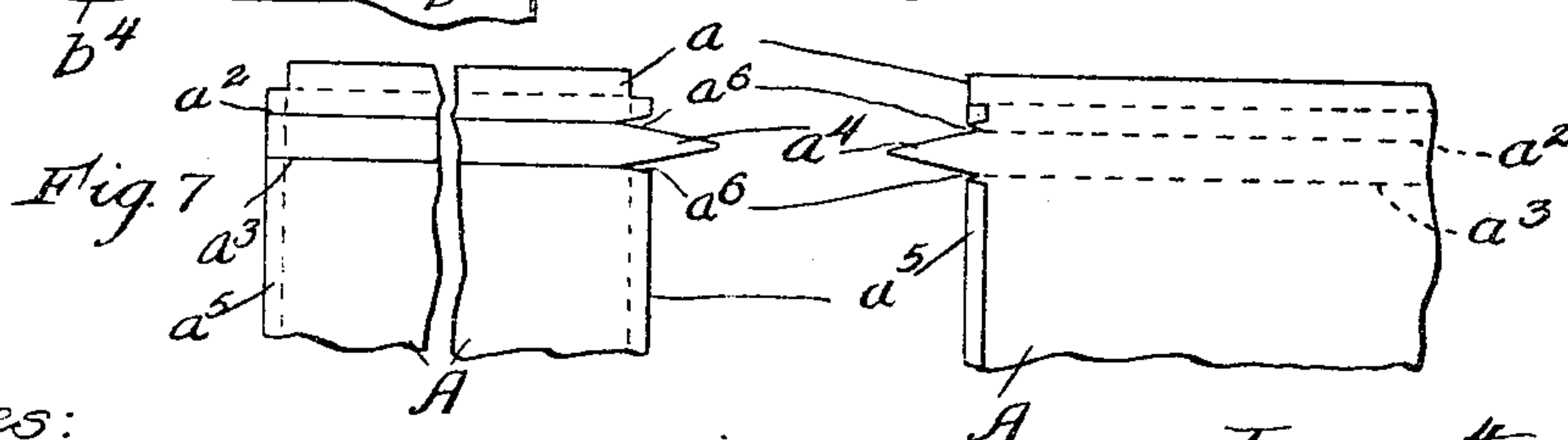
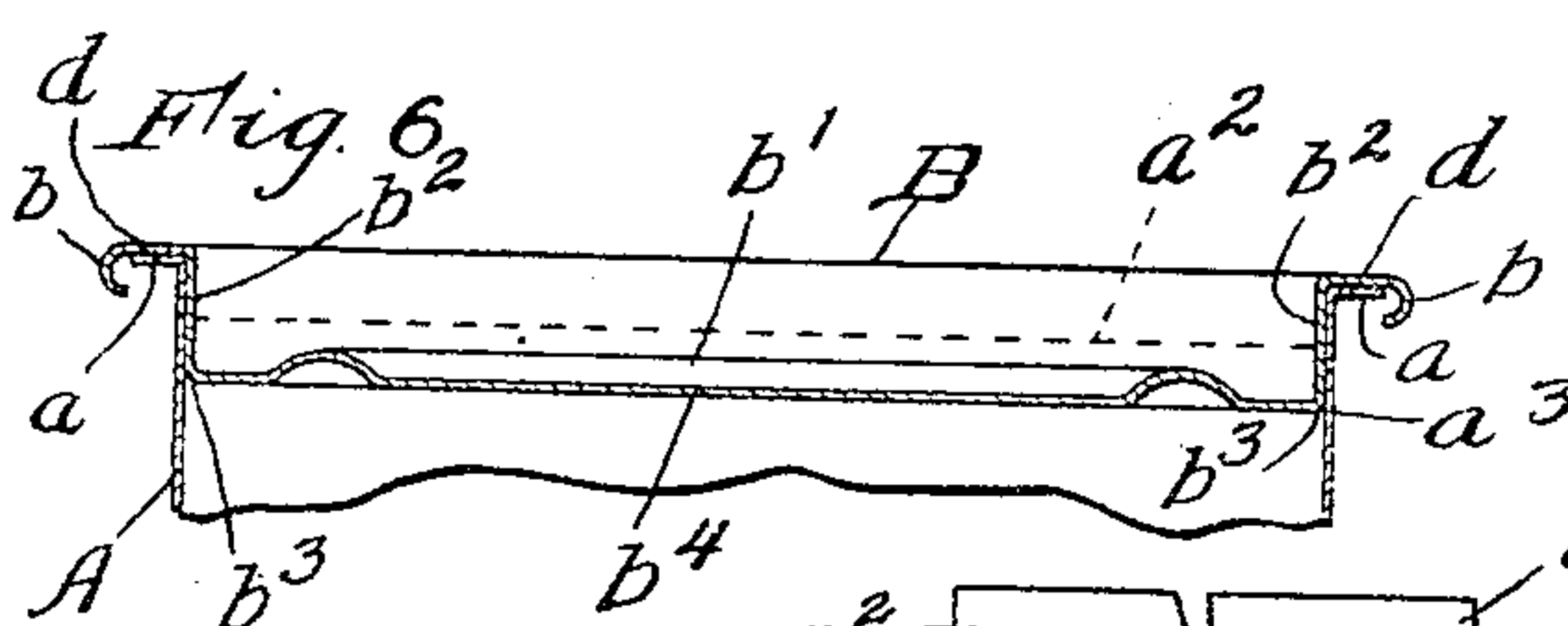
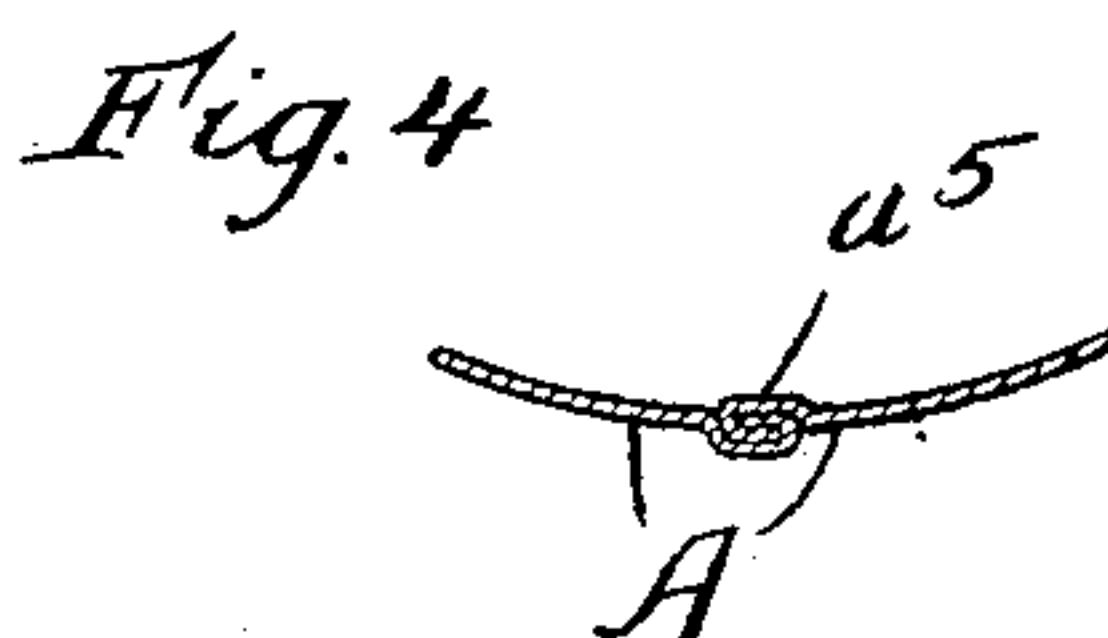
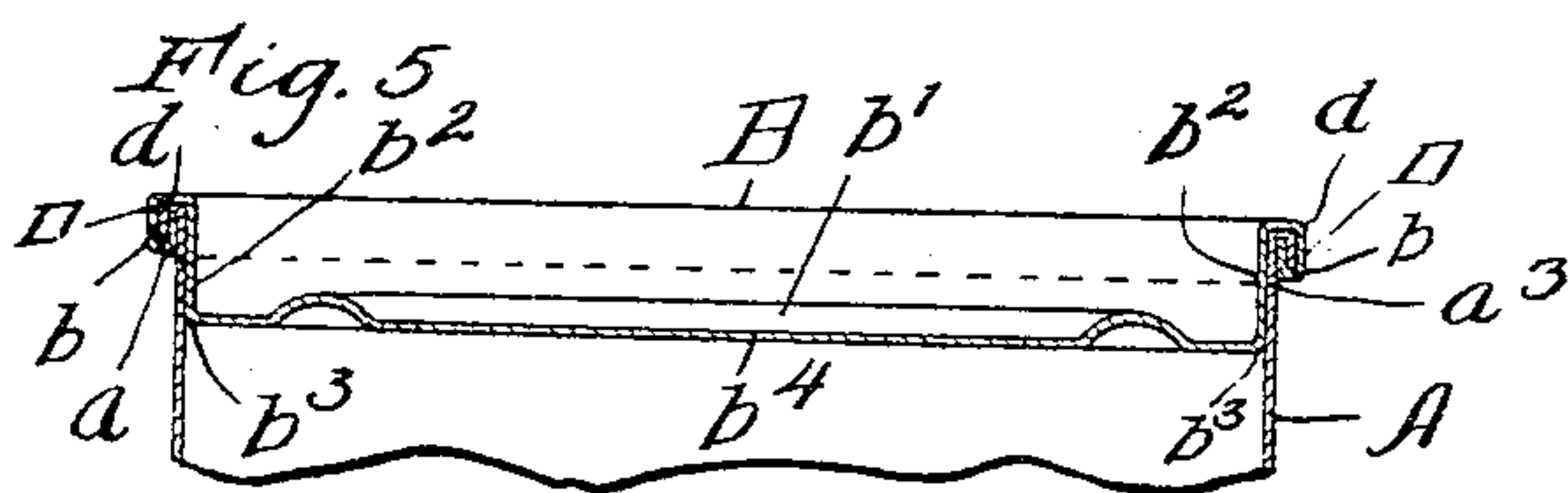
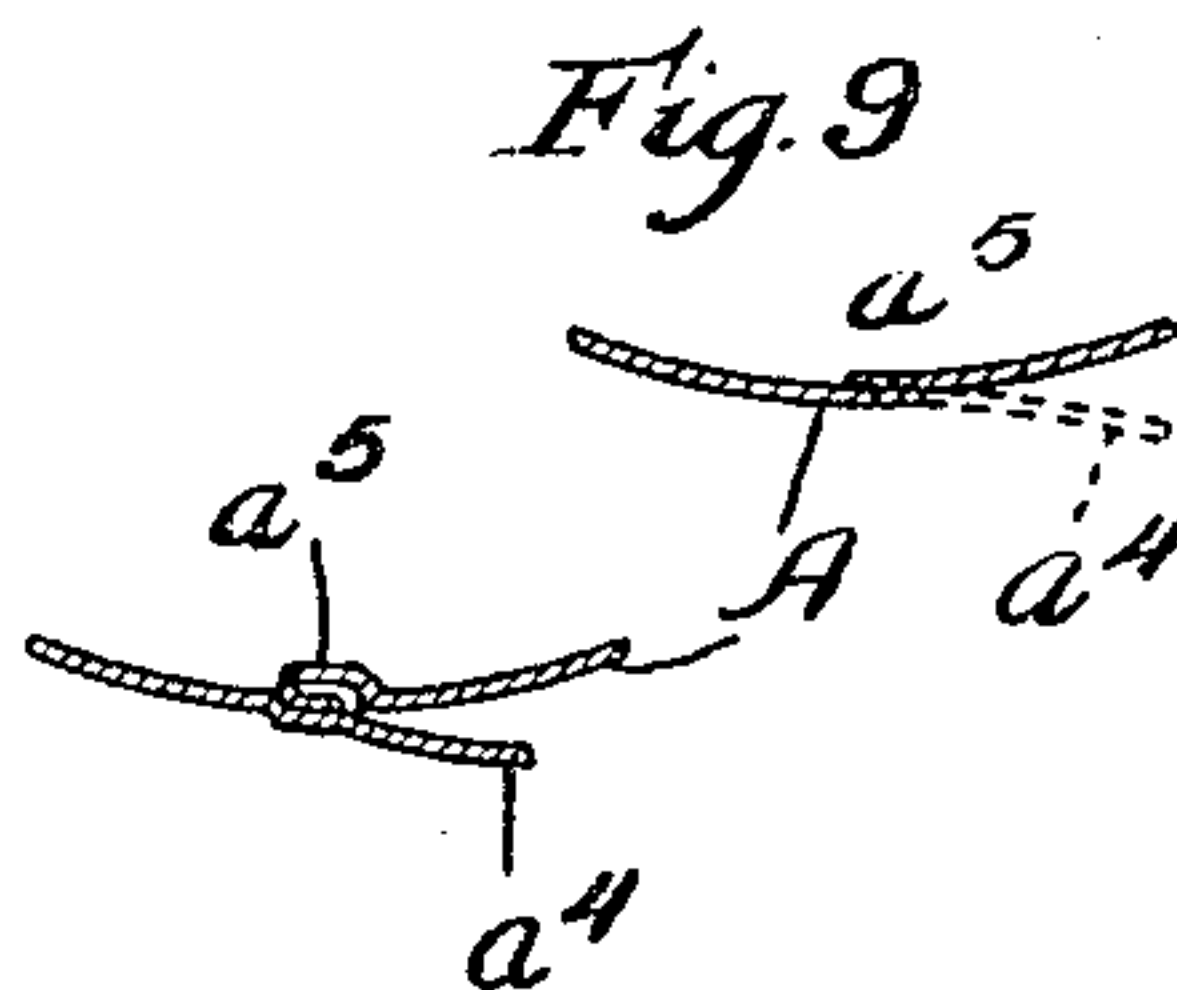
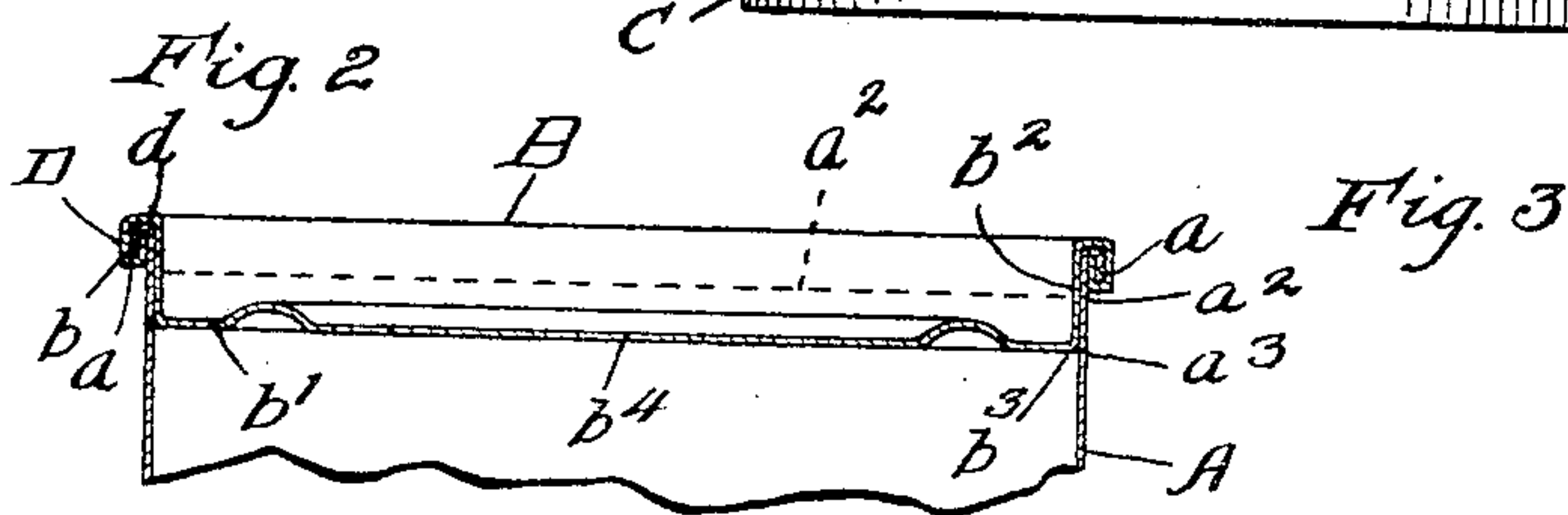
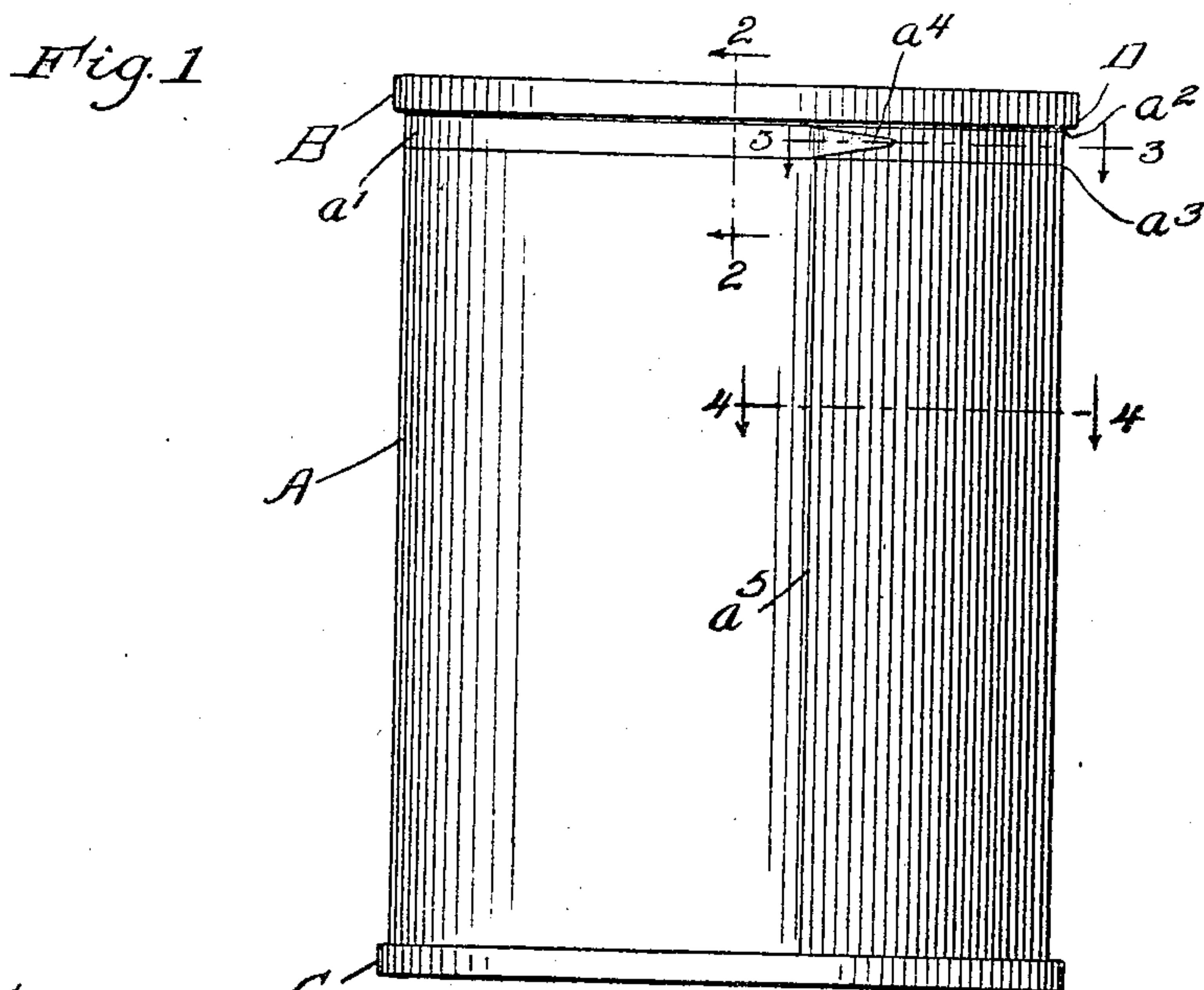


E. NORTON.  
KEY OPENING DOUBLE SEAM CAN.  
APPLICATION FILED FEB. 12, 1903.



Witnesses:

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# UNITED STATES PATENT OFFICE.

EDWIN NORTON, OF NEW YORK, N. Y., ASSIGNOR TO AUTOMATIC VACUUM CANNING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## KEY-OPENING DOUBLE-SEAM CAN.

No. 795,537.

Specification of Letters Patent.

Patented July 25, 1905.

Application filed February 12, 1903. Serial No. 142,992.

*To all whom it may concern:*

Be it known that I, EDWIN NORTON, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented a new and useful Improvement in Key-Opening Double-Seam Cans, of which the following is a specification.

My invention relates to improvements in key-opening cans.

The object of my invention is to provide a key-opening can of a simple, efficient, and economical construction, in which the tongued tearing-strip is on the body of the can and which may be opened easily and with certainty, which when opened by removal of the tearing-strip will leave the can of substantially its full or original capacity, so that oil or other liquid portion of its contents will not spill and to which the cover may be again applied after the can has once been opened.

My invention consists in the means I employ to practically accomplish this object or result—that is to say, it consists in connection with a can-body having a seaming-flange at one end and a head or cover having a deep countersink fitting inside the can-body and a seaming-flange folded into a double or four-wall seam with the seaming-flange of the can-body and a tearing-strip on the can-body fitting against and supported, stiffened, and strengthened by the countersunk portion of the can head or cover, which fits inside the can-body, the lower score or weakened line of the tearing-strip being at or near the lower edge or corner of the countersink of the cover and the upper score or weakened line of the tearing-strip being immediately at or near the lower edge of the double seam formed by interfolding the seaming-flanges of the can-body and the cover. By this means the external double seam which unites the cover to the can-body coöperates with the tearing-strip to strengthen and stiffen the can-body at the upper end and hold it to true cylindrical shape while the tearing-strip is being wound upon the key, thus causing the tearing-strip to separate with ease and certainty at the upper score or weakened line, while at the same time the countersunk portion of the cover, the lower edge or corner of which is closely adjacent to the lower score or weakened line of the tearing-strip, coöperates in like man-

ner with the tearing-strip to strengthen and stiffen the can-body and cause the tearing-strip to separate with ease and certainty as it is being wound upon the key. The vertical wall of the countersink of the cover forms, as it were or so to speak, an inside mandrel directly at the tearing-strip portion of the can-body, and thus causes the tearing-strip to readily separate at the scores or weakened lines with certainty and without danger of its breaking or tearing across. As the lower score of the tearing-strip is at or near the lower edge or corner of the countersunk portion of the cover, the can after being opened by means of its tearing-strip remains of substantially its full capacity, so that no liquid contents of the can will spill. This is of great advantage, especially in cans for fish, where the oil always runs out when the can is opened in the key-opening tearing-strip cans heretofore in use. In my can it will be observed that as the cover is united to the can-body by a double seam or four-wall seam without solder there is no soldering operation tending to solder fast the projecting tongue of the tearing-strip to the can-body, and I am thus enabled to locate my tearing-strip close to the upper end of the can-body. In key-opening tongued tearing-strip cans heretofore in use, where the head or cover is united to the can-body by a soldered seam, the act of soldering the cover to the can-body will solder the projecting tongue of the tearing-strip down fast unless the tearing-strip is located some distance from the end of the can. The double seam uniting the cover to the can-body in my tearing-strip can thus not only coöperate with the tearing-strip to cause the tearing-strip to separate with ease and certainty, but also to produce the further very important result of leaving the can of substantially full capacity after it has been opened by removal of the tearing-strip.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown or described.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a key-opening tongued tearing-strip can embodying my invention. Fig. 2 is a detail section of the same. Figs. 3 and 4 are detail horizontal sections through the side



seam of the can-body at line 3 3 and 4 4, respectively, of Fig. 1. Fig. 5 is a detail sectional view showing the can after it has been opened by removal of the tearing-strip and again closed by inserting the countersink cover as a plug within the open mouth of the can. Fig. 6 is a detail sectional view showing the can before the seaming-flanges on the can-body and cover have been folded together to form the seam, and thus close the can hermetically tight. Fig. 7 is a detail view showing a portion of the can-body blank in the flat; and Fig. 8 is a similar view showing the same after the edge fold has been formed at one edge of the blank preparatory to producing the side seam of the can-body. Fig. 9 is a detail section showing the lap form of side seam.

In the drawings, A represents the can-body, B the upper head or cover, and C the lower head or bottom of the can.

The can-body A has a seaming-flange *a* at its upper end interfolded with a seaming-flange *b* on the cover B into a hermetically-tight seam D, produced by the close interfolds of the seaming-flanges on can and cover in connection with the interposed packing or gasket *d*, the seam being preferably of the kind or type commonly known in the art as a "double" seam or "four-wall" seam. The cover B has a deep countersunk portion *b'* fitting inside the can-body, the upright wall *b''* of this countersink equaling or almost equaling in width the width of the tearing-strip *a'* on the can-body and of the external seam D, which unites the cover to the can-body. The tongued tearing-strip *a'* on the can-body is marked off by scored or weakened lines *a'' a'''*, the upper one *a''* of which is directly adjacent or slightly below the lower edge of the seam D, and the lower one *a'''* of which is substantially at the lower edge or corner *b'''* of the countersink portion of the cover B—that is to say, substantially in line with the plane or flat disk portion *b''* of the cover. The tearing-strip *a'* thus fits and bears directly against the countersunk wall *b''* of the cover, which acts somewhat as an inside mandrel to support, stiffen, and hold in position and in shape the tearing-strip portion of the can-body. The tongue *a''* of the tearing-strip projects outwardly, so that its free end may be readily engaged by the key around which the tearing-strip is wound in opening the can.

The side seam *a''* of the can-body may be of the well-known lock-seam type illustrated in Figs. 3, 4, and 8, in which case the tongue *a''* of the tearing-strip *a'* has notches *a'' a'''* on

each side thereof, or it may be of the equally-familiar lapped-seam type indicated in Fig. 9.

I hereby disclaim as not of my invention the constructions shown in the Walsh patent No. 558,129 and in the Pratt reissued patent No. 11,264.

I claim—

1. In a key-opening can, the combination with a can-body having a seaming-flange at its end, of a deep countersunk cover fitting within the mouth of the can-body and having a seaming-flange interfolded with the seaming-flange on the can-body into an external seam, the can-body being provided with a tongued tearing-strip closely adjacent to the folded seam uniting the can-body and cover and having two parallel scores or weakened lines, one at the lower edge of said seam and the other near the lower circumferential corner of the cover, said tearing-strip fitting against and being supported on the inside by the upright wall of the countersink of the cover, said seam and said countersink of the cover cooperating to strengthen, stiffen and hold in shape the can-body while the tearing-strip is being wound upon the key, and to cause the tearing-strip to separate with ease and certainty, the external seam forming a stop or shoulder on the cover to engage the end of the can-body when the can has been opened by removal of the tearing-strip substantially as specified.

2. In a key-opening can, the combination with the can-body A having a seaming-flange *a* at its upper end, and a tongued tearing-strip *a'* marked off by parallel scores or weakened lines, of a cover B having a deep countersink fitting within the mouth of the can and a seaming-flange *b* interfolded into an external double seam D with the seaming-flange *a* of the can-body the upper score or weakened line of the tearing-strip being at the lower edge of said seam, the upright wall *b''* of the countersink of the cover extending below the upper score or weakened line of the tearing-strip, said cover, after the can is opened by removal of the tearing-strip, being adapted to fit as a plug within the mouth of the can to again close the same, the external seam forming a stop or shoulder on the cover to engage the end of the can-body when the can has been opened by removal of the tearing-strip substantially as specified.

EDWIN NORTON.

Witnesses:

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