

(No Model.)

C. FREEMAN & C. B. EMMERICH.
CAN.

No. 506,589.

Patented Oct. 10, 1893.

Fig. I.

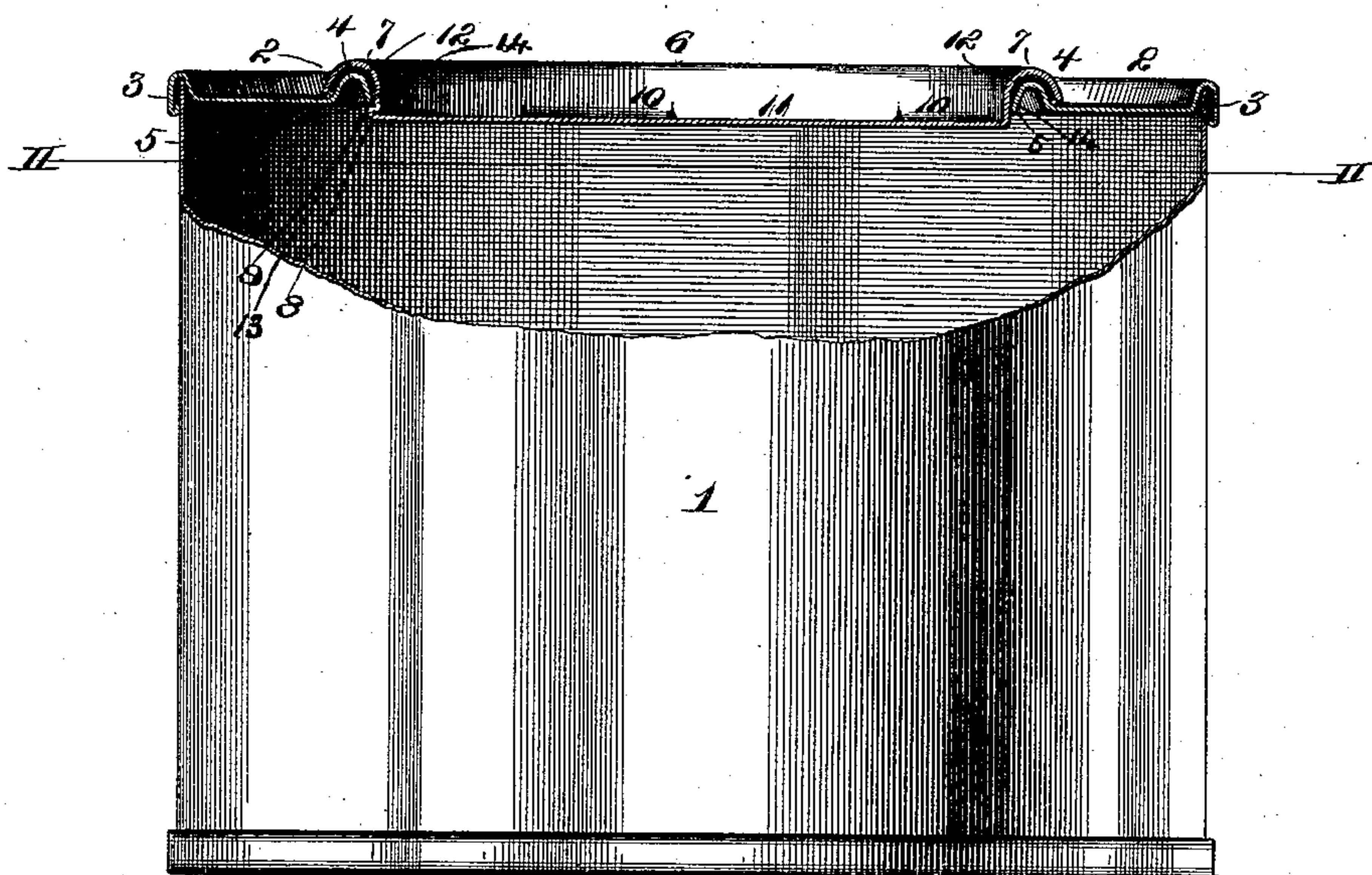


Fig. II.

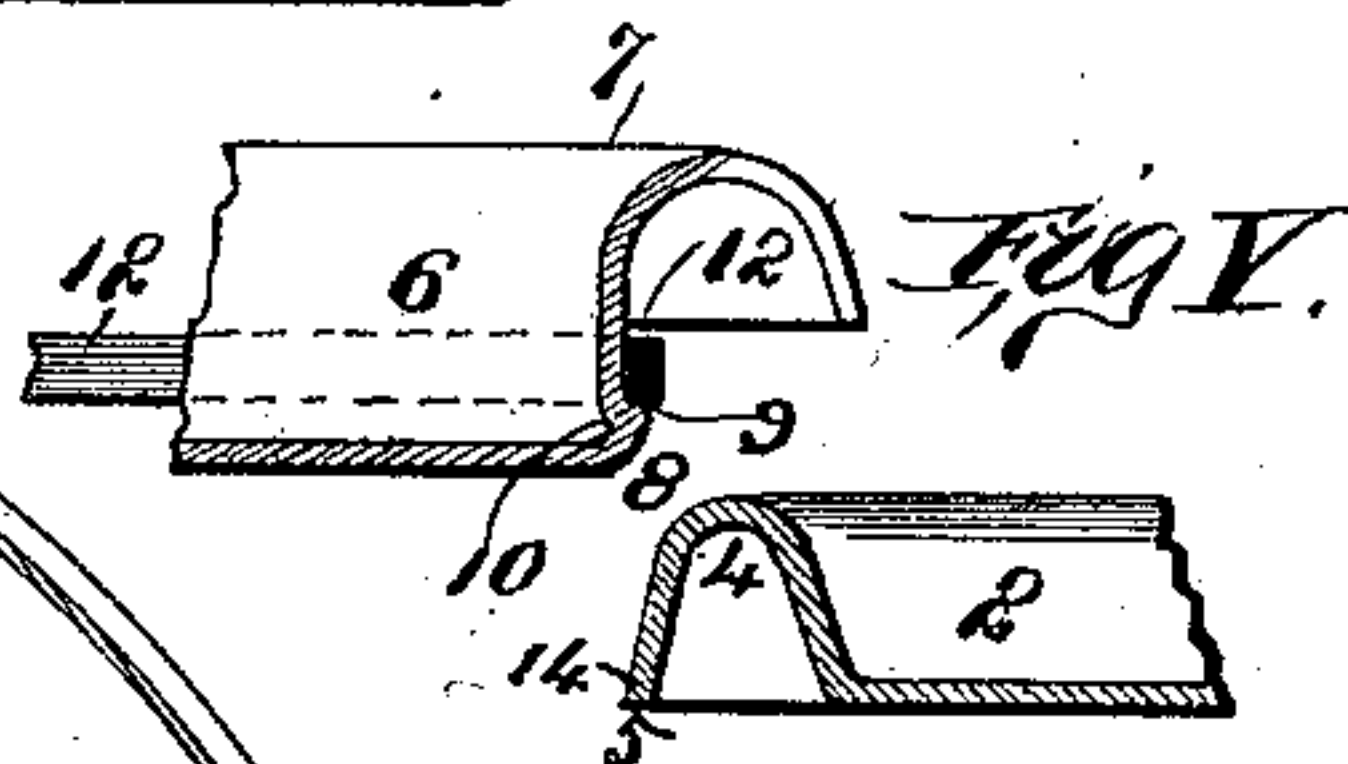
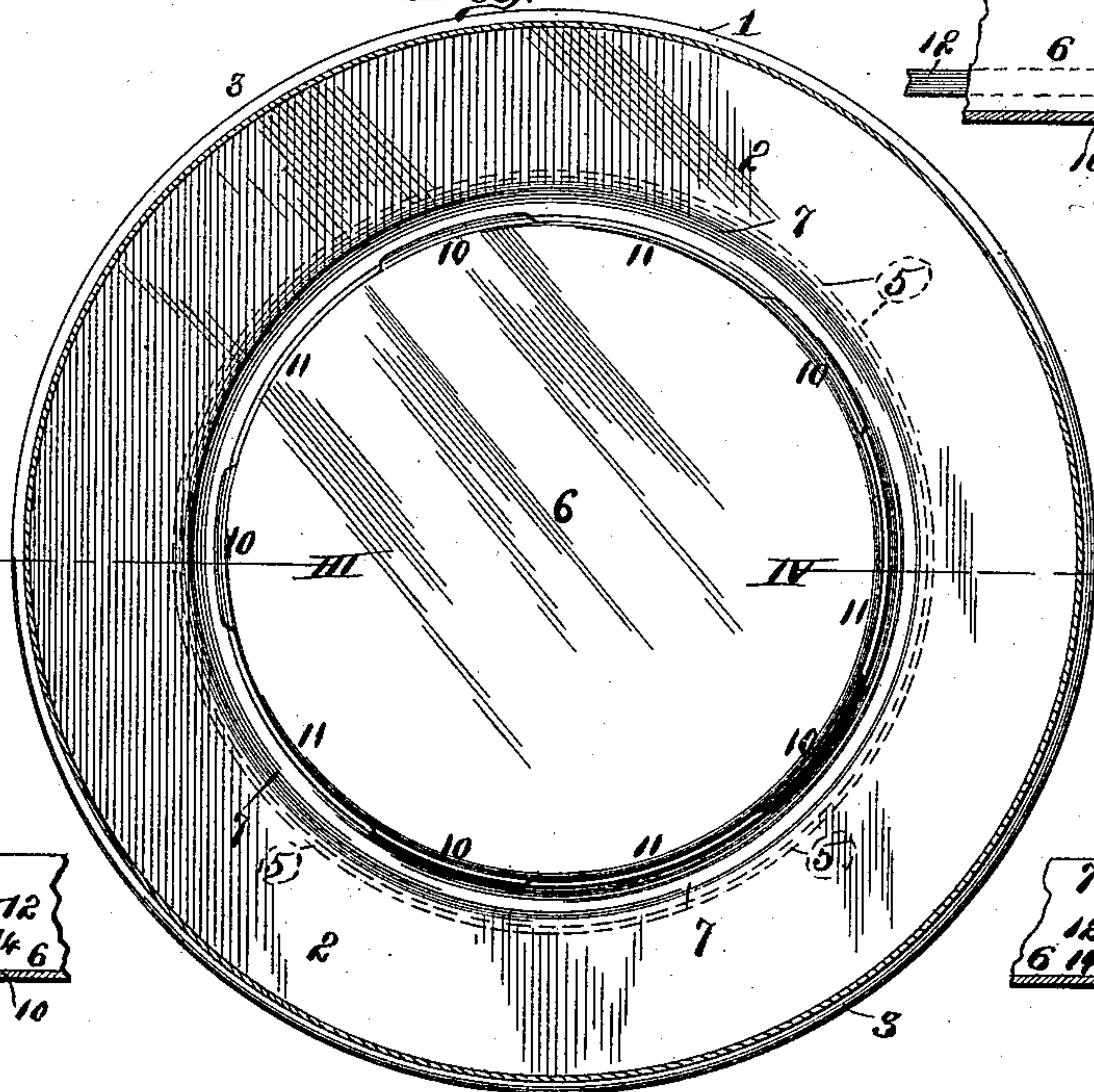


Fig. III.

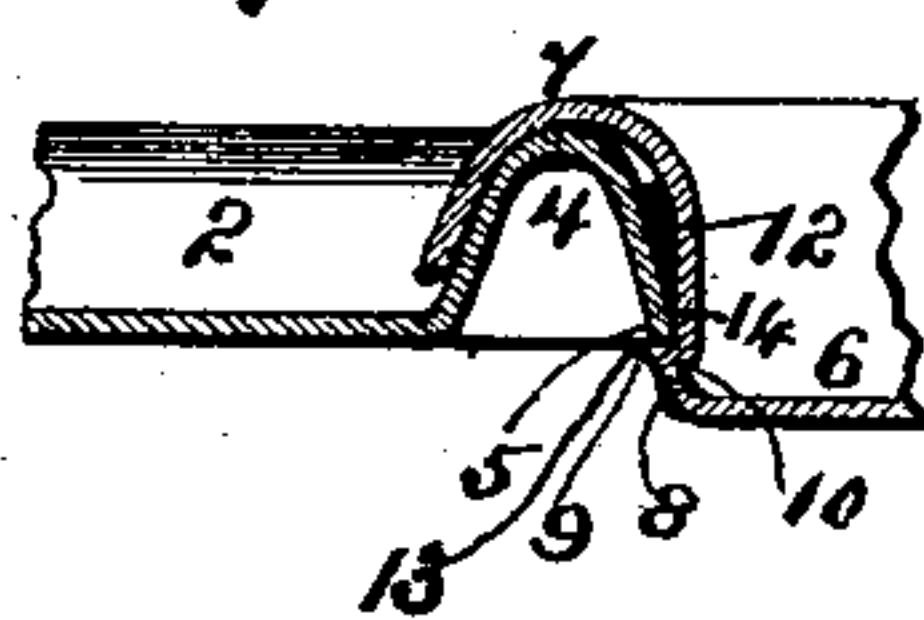


Fig. IV.



Attest:
Walter E. Allen.

Inventors:
Clark Freeman.
Charles B. Emmerich.
By Knight Bros.

UNITED STATES PATENT OFFICE.

CLARK FREEMAN AND CHARLES B. EMMERICH, OF ST. LOUIS, MISSOURI.

CAN.

SPECIFICATION forming part of Letters Patent No. 506,589, dated October 10, 1893.

Application filed August 20, 1892. Serial No. 443,589. (No model.)

To all whom it may concern:

Be it known that we, CLARK FREEMAN and CHARLES B. EMMERICH, both of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Cans, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a can with an abutting, internal flanged-rim around its mouth, and a lid having a flanged-rim that surmounts the aforesaid rim around the mouth, between which rims a rubber gasket, hermetically seals the inclosure, and from the foot of the flange rim of said lid, intermittent, projecting, locking catches are pressed outward, the said catches having a flat horizontal surface on top, the intervening, unprojected spaces between the catches providing a give and take movement when the lid is pressed down to enable said catches to spring into locking engagement in their seats; it will also be seen that the flat, horizontal, upper locking surfaces of said projections, snap into abutting engagement with the square faced, pendent edges of the locking rim around the mouth of the can, making a positive abutting lock; and the invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is an elevation of the can, with part broken away to show the pendent abutting catch rim of the can, and the intermittent catches of the lid with their square abutting positive lock holds. Fig. II is a horizontal section, taken on line II—II, Fig. I, and shows the top of the can with the intermittent, pressed projecting catches of the lid. Fig. III is an enlarged, detail, vertical section, taken on line III—III, Fig. II, and shows the square locking edge of the pendent rim of the can, and one of the square, abutting locking catches of the lid, in engagement with said square, pendent edge; it also shows the position of the rubber gasket as it creeps slightly upward and is pressed home between the respective flange rims of the box and lid. Fig. IV is an enlarged, detail, vertical section, taken on line IV—IV, Fig. II, and shows the positions of the respective parts shown in Fig. III, at an intervening point between the

square, abutting catches, and Fig. V is an enlarged, detached, detail section, and shows respectively the pendent square, locking edge of the can, and the projecting square abutting catch of the lid, as also the rubber gasket in its position of rest on said abutting catches previous to its creeping ascent under pressure to its sealing position.

Referring to the drawings:—1 represents the can, and 2 the annular collar within the top of said can, the periphery of which collar is secured by the usual flange joint 3 to the top of the can.

4 represents a flange rim around the inside of said collar, and 5 is the pendent locking square edge of said flange rim.

6 represents the lid of the can which lid is provided with a peripheral flange rim 7, which surmounts the rim 4 of the annular collar 2 of the can-top, when said lid is inserted and locked in position.

8 represents the intermittent projecting under jaws, which have square, faced locking catches 9, which catches abut squarely against the square, pendent edge 5 of the locking rim of the annular collar, and thus a positive, square, abutting lock of the lid to the top of the can is effected that cannot by any accident be jarred loose in shipment.

10 represent the recesses that are made in the rim of the lid, back of said intermittent locking projections, and 11 are the intervening spaces between said projections on one side and recesses on the other.

12 represents the rubber gasket, which is constituted of a rubber ring, that embraces around within the flange rim 7 of the lid and rests in its inoperative position, on the square face side 9 of the intermittent projecting under jaws 8 of the locking catches.

The operation of the device is as follows: Previous to filling the cans, as large a number of the lids, as are expected to be used at that time, have their rubber gasket rings mounted round the inside of their flange rim 7, the said gasket rings resting (while in abeyance, or in their inoperative positions) on the square, flat faces 9 of the under jaws 8 of the locking catches 13. It will be seen that both the respective faces 5 and 9 of the upper and lower jaws of the locking catches are square, so as unlike the usual curved bead catch, our

catches effect a positive face to face lock. A flat, rubber gasket may be used, as shown in Fig. 1, instead of the one described above, which modified gasket is placed on top of the flange rim 4, and is pressed to its hermetic seal by the flange rim 7 of the lid; but the previously described gasket ring, as shown in the enlarged views in Figs. III, IV and V, is our preferred form, as more convenient in the initial placing for use, and by its gradual creeping up under pressure to its seal, it makes the most effective hermetic seal. After filling the can with whatever material is to be preserved therein, the lid with said rubber gasket 12, mounted within its flanged rim and resting on the square faces 9 of the under jaws 8 of the locking catches, said lid is pressed down to its seat. As the lid works down the projecting upper lip 14 of the flange rim 4 of the annular collar 2 slightly lifts the rubber gasket from its seat on the square faces 9 of the locking catches, at the same time that the pressure of the front of said lip against the flange rim 7 of the lid, presses said gasket from its original shape as shown in Fig. V, to its compressed shape, as shown in Figs. III and IV, in which it effects a perfect hermetic seal, after the lid is pressed down so that the square locking faces 5 and 9 of the respective upper and lower jaws snap together and effect a square positive lock. The effect on the rubber gasket, while under pressure, is diverse to that of any other material, and thus it springs and creeps from its resting seat on the flat faces 9 of said catches and works up the incline of the projecting upper lip 14 of the annular collar rim 4, and being tightly pressed between the same and the flange rim 7 of the lid, it effects a perfect hermetic seal, that is preferable to that shown in our modification shown in Fig. I, in which as stated a flat gasket ring is pressed downward to its seat. As said preferred form of hermetic seal is more effective in its action, enlarged views of the same have been made in Figs. III, IV and V, showing the rubber gasket in position of abeyance and rest in Fig. V, and in its hermetic seal seat in Figs. III and IV.

Now it will be seen that in both our preferred form, and in the modification (as said modification only refers to the rubber gasket and its seal seat), the square faced locking abutting catch is the same in all the figures, and unlike the partial curved beads of other catches, that enter into curved recesses and thus do not effect a positive lock; to the contrary with our invention, the flat face 9 of the lower jaw 8 makes a positive lock with

the also flat face 5 of the pendent projecting lip 14 of the upper jaw; so that the lid cannot become unlocked until it is pried out preparatory to the use of the contents of the can. No amount of rough handling and jarring in shipping can effect the accidental unlocking of the lid and consequent loss of the contents of the can; consequently the very objectionable precautionary measure of soldering the lids of the cans to the tops previous to shipping is avoided, as our device makes a more positive and reliable joint even than solder, and avoids the expense and time of soldering, and the annoyance of breaking the solder joint by consumers. It will also be seen that the square faces 9 of the under jaws, besides making a positive lock, also make a square positive rest for the rubber gasket ring, while said gasket is in inoperative abeyance, from which resting seat the gasket creeps to its hermetic seal seat, vacating the former just in time for the same to snap into engagement with the corresponding square seat of the upper jaw.

We claim as our invention—

1. In a can and its fastening, the combination of the can 1, the lid 6, the annular rim 2, provided with the projecting locking lip having the square abutting edge 5, the under catch jaws 8, of the lid, said jaws having the flat abutting faces 9, which engage with the square edge 5 of the locking lip, and the rubber gasket 12 resting on the abutting faces 9, for forming a hermetic seal between the meeting edges of the can and lid, substantially as described.

2. In a can and its fastening, the combination of the annular collar 2, at top of the can, said collar having the flange curve rim 4, and the pendent projecting lip 14, the said lip terminating in the square abutting face 5, the flange curved rim 7 of the flat lid 6 of said can, the intermittent under locking jaws 8, the said under jaws having the flat, surmounting, locking face 9, the gasket ring 12, that when in abeyance rests on said locking faces 9 of said under jaws, and under the pressure of the lid creeps up said projecting lip 14 of the corresponding member of the lock, to its hermetic seal, the said abutting faces 5 and 9 of the respective upper and lower jaws snapping together in a positive, square lock engagement; substantially as described.

CLARK FREEMAN.

CHARLES B. EMMERICH.

In presence of—

BENJN. A. KNIGHT,

ALBERT M. EBERSOLE.