

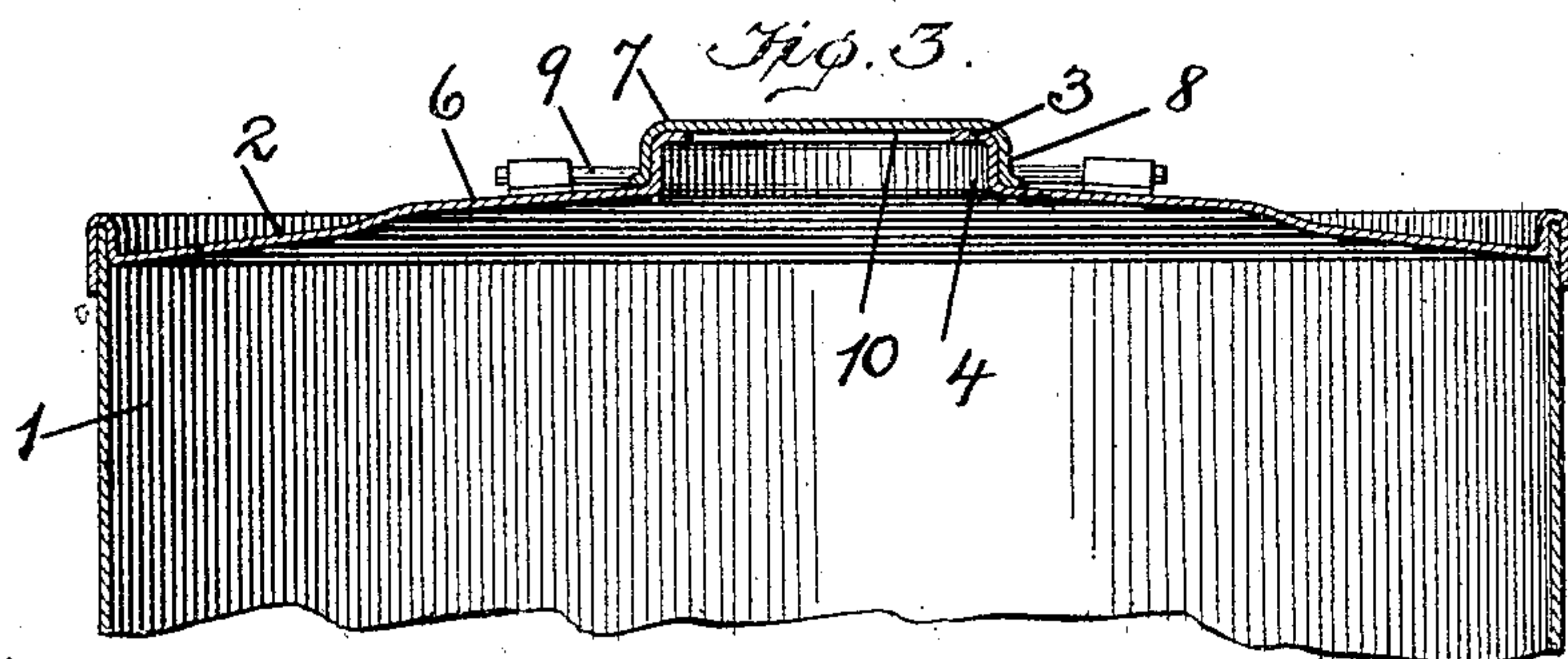
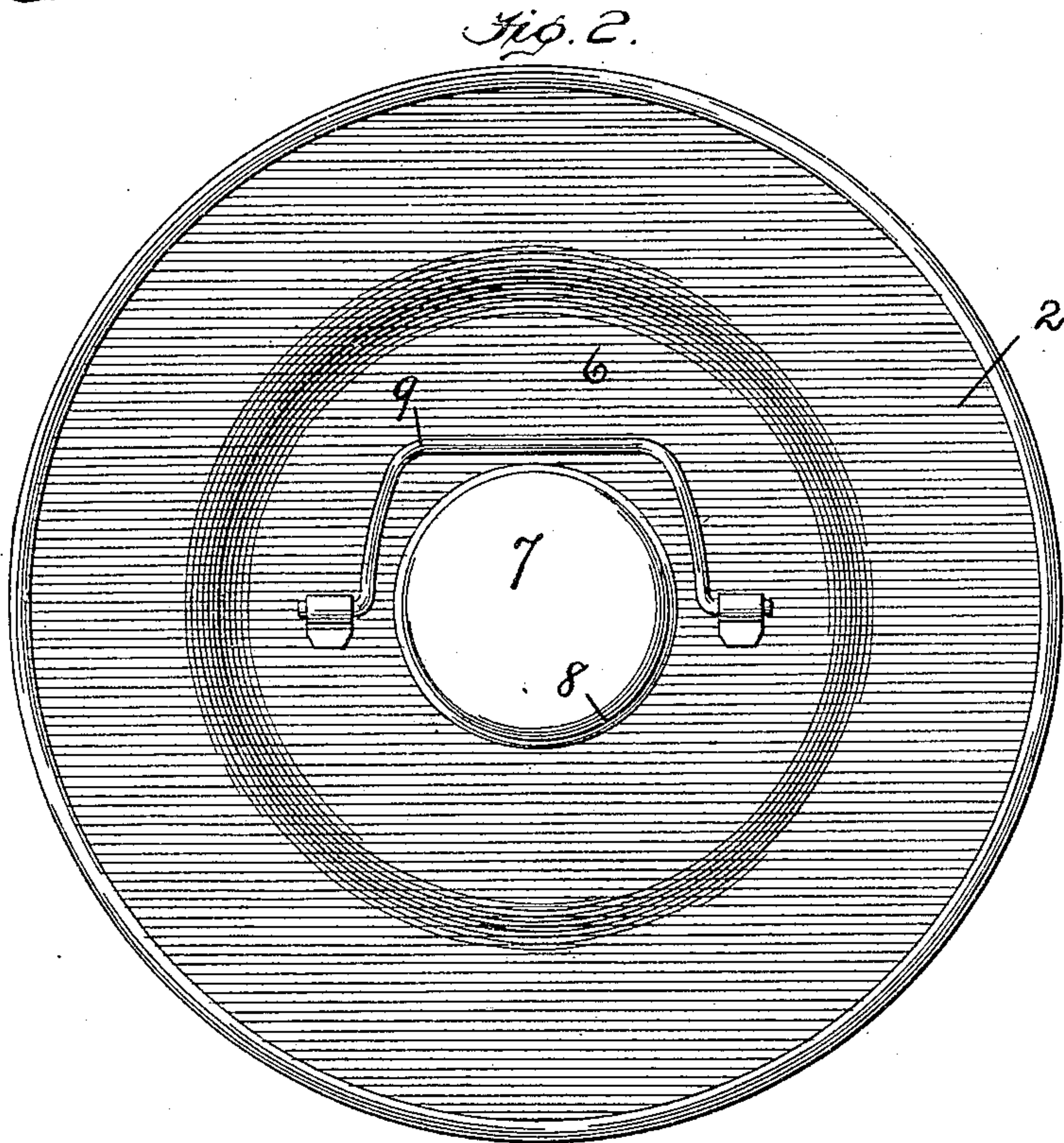
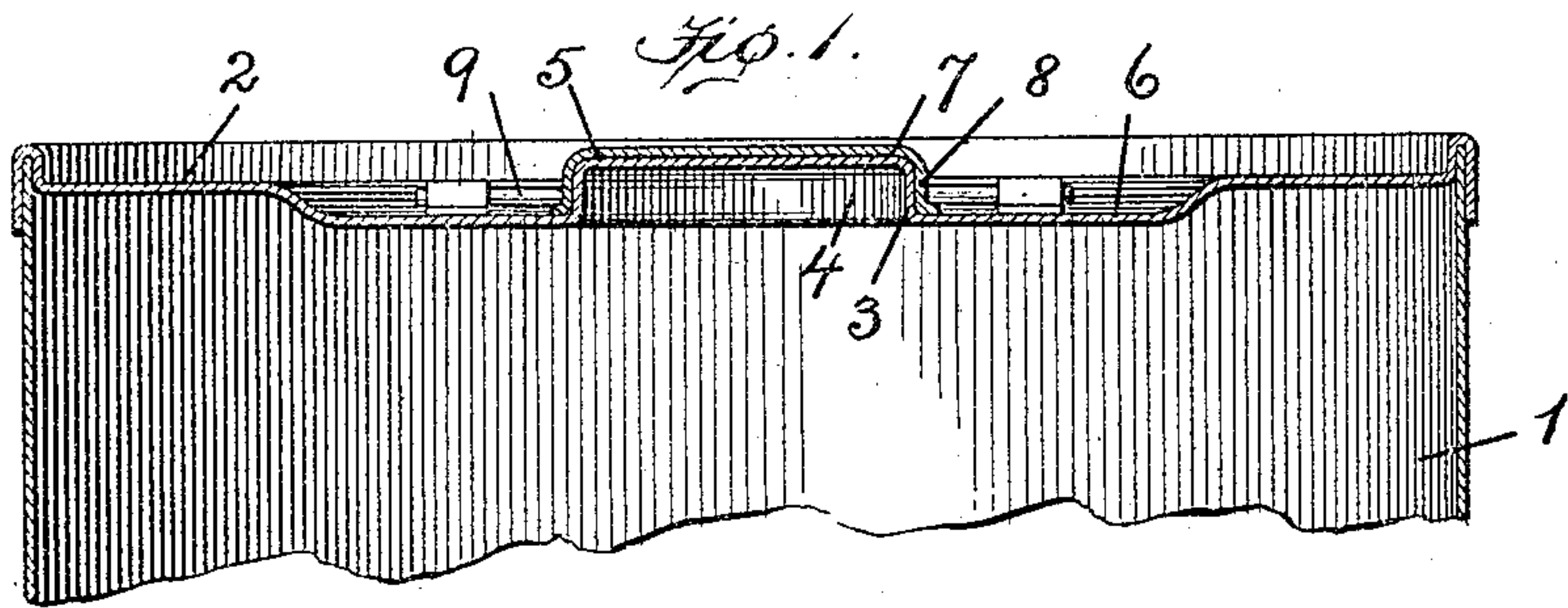
D. P. ROBINSON.

CAN END.

APPLICATION FILED OCT. 22, 1908.

960,109.

Patented May 31, 1910.



Inventor

Witnesses

Edwin L. Bradford.
G. Ferdinand Vogt.

By

Daniel P. Robinson
Mann & Co.
Attorneys

UNITED STATES PATENT OFFICE.

DANIEL P. ROBINSON, OF BALTIMORE, MARYLAND.

CAN END.

960,109.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed October 22, 1908. Serial No. 458,964.

To all whom it may concern:

Be it known that I, DANIEL P. ROBINSON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have
5 invented certain new and useful Improvements in Can Ends, of which the following is a specification.

This invention relates to improvements in sheet-metal cans and has particular refer-
10 ence to an improved construction of ends for cans that are to contain any material that may be poured from the can.

In packing syrup, milk, paint, powders and similar materials in cans it is desir-
15 able that provision be made whereby a portion of the material may be poured from the can and the latter then closed sufficiently to exclude dust, dirt or foreign matter.

One object therefore of my invention is
20 to provide an improved construction of can end having a pouring nozzle that may be formed integrally with the end, and another object is to provide a construction of end whereby the nozzle will project at the outer
25 side but lie in a plane below the marginal edges of the end so that the cans either empty or filled may be stored one on top of another.

A further object of the invention is to
30 provide an improved construction of can end whereby the metal in the end surrounding the pouring opening may be bulged or sprung outwardly to direct the contents toward said opening and thereby
35 enable practically the entire contents of the can to be discharged and thus avoid waste.

With these and other objects in view the invention is illustrated in the accompanying drawing in which,

40 Figure 1 is a vertical section through the can end and the upper portion of a can to which it is attached. Fig. 2 is a plan view of the same, and Fig. 3 shows a sectional view of the end sprung outwardly with a
45 hole punched in the nozzle and the cap in place thereon.

Heretofore it has been the practice to pri-
50 marily provide the end with a central opening through which the can was filled and to then close said opening and seal the can by means of a cap that was soldered to the top around the marginal edges of said open-
55 ing. These caps have been formed with pouring nozzles which in some instances project outwardly while in other instances

wardly. The inwardly projecting nozzles are objectionable because they form a wall around the discharge opening and prevent the discharge of the entire contents, and the
60 outwardly-projecting nozzles are objectionable because while preventing the discharge of the entire contents of the can they also prevent the stacking or packing of the cans on top of each other. Another objection to
65 both of the forms heretofore in use is the expense in separately producing the nozzles and then afterward soldering them onto the ends or covers.

By means of my invention I produce an
70 imperforate nozzle and end in a single integral piece and thus avoid the additional operations above referred to and I form the nozzle portion of the end in such a manner that it may project outwardly without in-
75 terfering with the stacking or packing of the cans.

Referring to the drawing by numerals, 1, designates the body of the can which may be circular or of other desirable shape and
80 to which my improved end, 2, may be secured in any desirable manner. This improved end is imperforate, being without the usual central opening, and is provided with an integral central and laterally-ex-
85 tending portion, 3, the vertical walls, 4, of which may be made to serve as a nozzle when it is desired to pour the contents from the can. In its normal sealed condition, the outer surface, 5, of the central portion of
90 the end preferably has position in a plane flush with or below the marginal edge of its end. To effect this the end is substantially concaved or is provided with an annular depressed portion, 6, around the said
95 central nozzle portion, 3. It is to be understood that the particular configuration of the can end to depress the central portion thereof below the marginal edges of said end is immaterial and may differ somewhat ac-
100 cording to the views of the various can makers.

In practice, access to the contents of the can is had by punching a hole in the cen-
105 tral laterally-extending portion or nozzle, 3, and in order that this may be readily accomplished I may provide a score line around the outer surface, 5, of said portion. A cap, 7, is preferably formed with an
110 annular depending flange, 8, of a size to snugly fit the central laterally-extending portion, 3, so that after a hole, 10, has been

punched into said portion to permit the escape of the contents the cap may be fitted about said portion and serve as a removable cover therefor.

5 In designing the end I have made provision whereby the metal surrounding the central portion, 3, may be sprung outwardly and thereby produce a funnel-like formation as shown in Fig. 3 of the drawing. The
10 springing of the end may be accomplished in various ways after a hole has been provided in the central portion and air admitted therein. By turning the can upside-down the weight of the contents will
15 often be sufficient to effect a bulging of the can end,—the latter being provided with a depressed annular portion so that when sprung outwardly it may remain in that condition. If desired, a bail, 9, may be pivotally
20 attached to the can end so it may swing, and in such case after a hole has been made in the central portion of the end the suspension of the filled can from the bail will spring the end outwardly to produce the
25 funnel-like formation.

In using a can constructed in accordance with this invention the same is filled and closed in any of the well-known ways. As the nozzle end is formed of a continuous
30 single piece of metal it avoids the additional and usual operations of forming caps and then attaching these caps to the ends to effect a sealing of the cans. Moreover the the end may also be readily formed so that
35 the central portion or nozzle may normally lie below the rim edge of the end and thus enable the cans to be placed one upon another.

40 Having thus described my invention what I claim and desire to secure by Letters Patent is,—

1. A can including a body portion and an end therefor, comprising a normally inwardly dished substantially smooth portion,
45 a projecting nozzle located centrally of said dished portion and so disposed that one can

may be stacked on another, said dished portion being capable of being sprung outwardly to form a smooth outwardly extending surface to aid in emptying the contents
50 of the can.

2. A can including a body portion and an end therefor, comprising a normally inwardly dished smooth portion, an outward projecting nozzle located centrally of said
55 dished portion and having its outermost portions lying inside a plane containing the outermost portions of the end, whereby one can may be stacked on another, said dished portion being capable of being sprung out-
60 wardly to form a smooth outwardly extending surface to aid in emptying the contents of the can.

3. A can including a body portion and an end therefor, comprising a normally inwardly dished portion located centrally of
65 said end, an integral nozzle located centrally of said dished portion and projecting outwardly therefrom, said nozzle having its outermost portions lying inside a plane containing the outermost portions of the end,
70 whereby one can may be stacked on another and said central portion being capable of being dished outwardly to aid in emptying the contents of the can.
75

4. A can having an imperforate top with an outwardly-projecting central nozzle formed integrally therewith whose uppermost surface has position in a horizontal
80 plane below the plane of the rim edge of the top and said top having an annular depressed yielding portion which extends laterally from the base of the nozzle whereby upon being sprung outwardly said annular
85 portion will form a drain toward the outwardly-projecting central nozzle.

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL P. ROBINSON.

Witnesses:

G. FERDINAND VOGT,
CHARLES B. MANN, Jr.