

(No Model.)

2 Sheets—Sheet 1.

A. BAKER.
PACKAGE.

No. 483,523.

Patented Oct. 4, 1892.

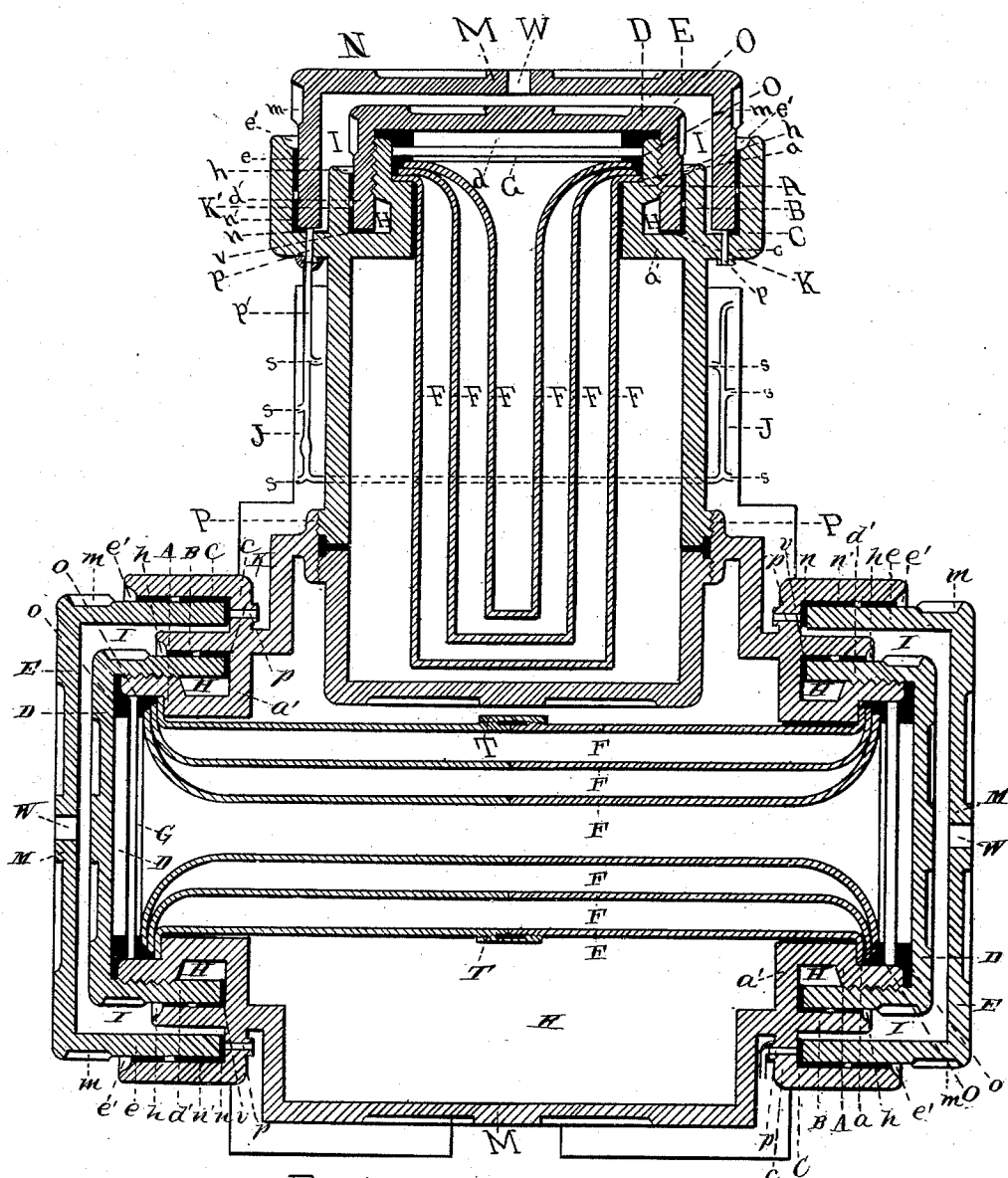


Fig. 1.

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M. J. Leonard

Inventor
Albert Baker
By his Attorney
H. C. Hartman

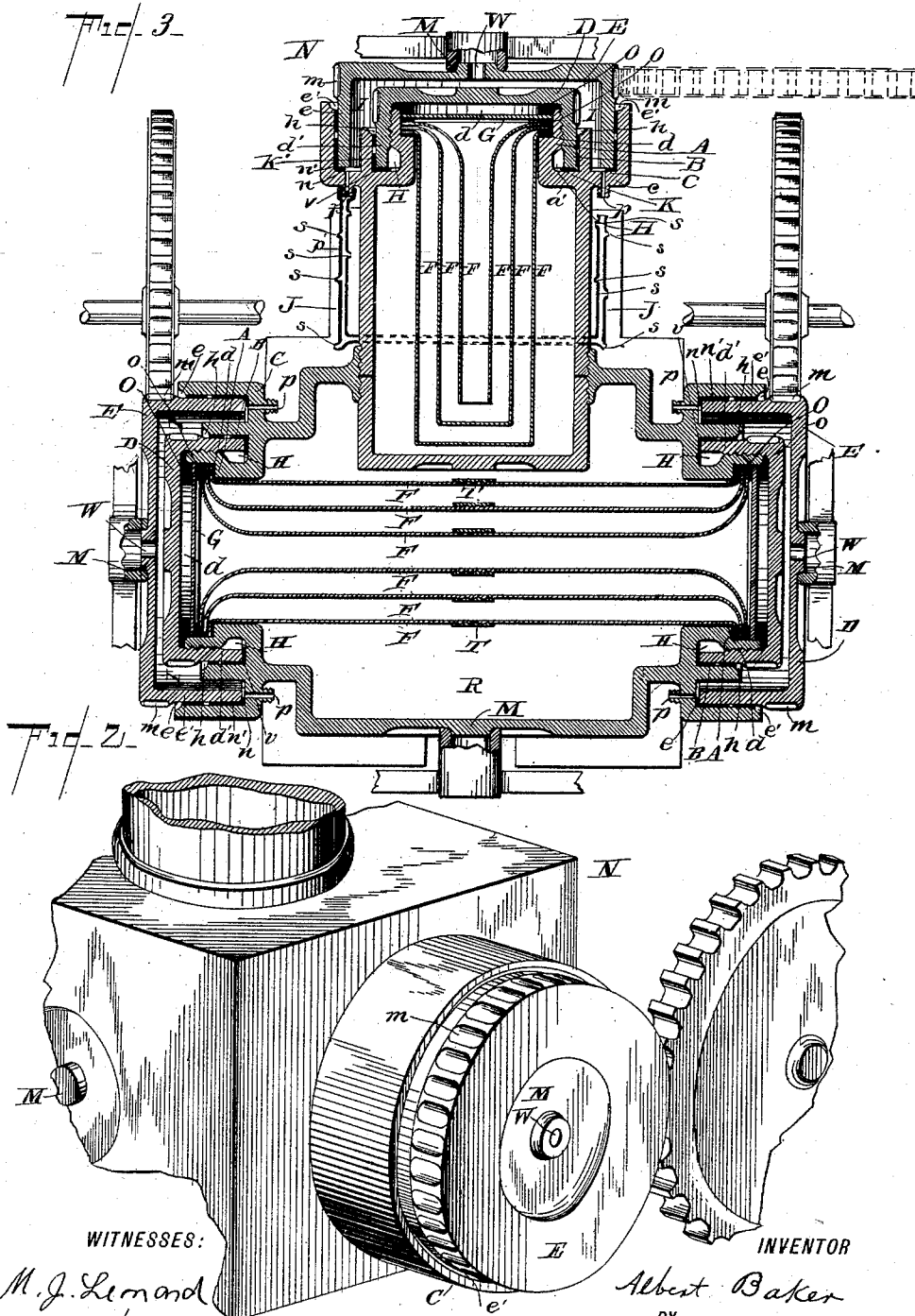
(No Model.)

2 Sheets—Sheet 2.

A. BAKER.
PACKAGE.

No. 483,523.

Patented Oct. 4, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ALBERT BAKER, OF FORT WAYNE, INDIANA, ASSIGNOR OF ONE-HALF TO
FRANK D. BITTINGER, OF DAYTON, OHIO.

PACKAGE.

SPECIFICATION forming part of Letters Patent No. 483,523, dated October 4, 1892.

Application filed December 3, 1890. Serial No. 373,417. (No model.)

To all whom it may concern:

Be it known that I, ALBERT BAKER, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Packages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in cases used for holding, handling, and preserving foods and other materials; and the objects of my improvement are, first, to provide improved hermetically-sealing devices, and, second, means by which the appropriate agencies and materials may be used to regulate and control the conditions and to improve and preserve foods, liquids, or other substances which may be placed in the case or package. I include in the term "case" jars and all other forms and kinds of packages for such purposes. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of my complete device, such as is used for transporting or handling large quantities of material. Fig. 2 is a perspective view showing a driving cog-wheel partially broken away in engagement with the cogs upon the cover E of the case R. Fig. 3 is a vertical section similar to Fig. 1, with the addition of driving cog-wheels and journal-bearings partly broken away to illustrate the connection of the driving cog-wheels with the cogs in the covers.

Similar letters of reference refer to like parts throughout the several views.

The hermetical sealing devices consist of the following construction: The opening of the case or its neck is provided with the projections A B C and lateral flange c, substantially in the form shown in Fig. 1. Where the covers D and E are secured in place by screwing them on, as shown in cover D in the drawings, these projections are made circular in cross-section; but if otherwise secured any other suitable form may be used. The projection A is constructed with an interior recess a upon its upper inner surface, so as to provide a shoulder for the support of one

or more flanges of the interior vessels F and the disk or plate G, and also of such depth as to provide a space or chamber d between the plate and the cover, with suitable packing material O between the flanges, plate, and cover, as shown by the heavy lines. The projection A is also constructed with a lateral flange a' upon its lower end, which extends out therefrom to the side of the case, forming a seat K for the rim of the cover D, and in combination with the projection A and said rim forming the chamber H. This flange a' is preferably connected to the projection B. By this construction the plate G forms an additional cover and the chambers d and H form spaces to be filled with substances to aid in hermetically sealing. The cover D, constructed preferably in the form shown, is provided with a deep flange d', adapted to closely envelop that part of the projection opposite the interior recess a. Its rim rests on the flange a' with intervening packing v and is adapted to press thereon when the cover is secured in place, so as to make a hermetically-tight joint, and its flange d' forms, also, part of the chamber H. The packing material v extends, preferably, up between the flanges d' and the projection B, as shown.

The projection B is so constructed as to receive the flange d' of the cover D and closely envelop it with intervening packing material K'. Its rim is, when desired, chamfered inwardly, so as to form with the flange d' a groove or receptacle h to hold wax or other sealing substance to hermetically seal at that place. The primary purpose or function of this projection B is to aid in hermetically sealing; but another function is to add to the security of the cover D and its flange and to the security of the projection A, which it does by forming an additional wall to be broken before the flange d or the projection A can be affected by external force. The projection C is also combined with a lateral flange c, extending to and connected with the projection B, and this lateral flange c is constructed so as to form a seat for the rim of the flange e and space for the perforations p. This lateral flange c may be attached to the neck of the case instead of to projection B, if desired. The projection C is adapted to en-

velop the flange *e* closely with intervening packing material *n'*. The rim of this projection is preferably chamfered inwardly to form a groove *e'*, in combination with the flange *e*, for the purpose of receiving wax or other sealing substance to hermetically seal at that place. The function of the projection C is to aid in hermetically sealing and to protect the flange of the outer cover E; but the projection C may be dispensed with if its functions, as described, are not required and the lateral flange *c* be used, as described, independently. The outer cover E is constructed with a deep flange, so that when in place it provides a space or chamber I, extending all around its interior surface. One or more of these chambers *d*, H, and I may be filled with water, oil, or other substances to aid in hermetically sealing, and such substances may also be adapted to preserve the packing with which they come in contact to destroy bacteria and spores and for other purposes.

It is obvious that the projection A may be used with the cover D separately or with the projection B, omitting the projection C and lateral flange *c* and cover E. If two or more of these projections are used, they are preferably constructed integral with each other and may be attached to the case by cementing or in any suitable manner. These hermetical sealing devices, providing also for the chambers *d*, H, and I, are attached to the openings of the case N and the central case R, as shown.

The central case R is of any suitable form and size, preferably rectangular, as shown in the drawings, and its function is to contain other cases N and vessels F, and also to contain elements and substances which may be placed therein to affect the condition of the contents of the inclosed cases and vessels in like manner, as described in vessel or case N.

Where separate cases N are to be inclosed in the central case R, their openings or necks are provided with hermetical devices, preferably those hereinbefore described, and are let into openings in the case R, preferably up to the lateral flange *c* of the projection C; but when the case N is constructed in sections, as shown in the drawings, it is preferably partially inclosed and preferably up to the junction P of the sections, as illustrated in the drawings. When vessels F are to be inclosed separately in the central case R, the sealing devices hereinbefore described are attached to an opening in the case R and the vessels F are placed therein with the flanges resting on the shoulder of the recess *a* in same manner as in the case N, hereinafter described. When these vessels F are let in from opposite sides of the case R, as shown in the drawings, the ends of the outer vessel are preferably connected together without bottoms by a screw-band T, as shown. The spaces in the central case R around these cases and vessels are used as above stated.

For example, ice may be placed therein or chemical substances generating heat or cold or other action. The utility of inclosing cases provided with means to hermetically seal the openings of the inserted cases in the central case R is first the protection of the inclosed cases and affecting them alike with substances to regulate the temperature or condition of the contents which will continue their effects or action for a long time. This occurs when the inclosed vessels N or similar ones are let in up to the lateral flange *c*, and the space left in the interior of the package R is filled with ice and hermetically sealed for long transportation. When the combination consists of cases N and vessels F, as shown in the drawings, the utility consists, first, of the weak part in the case N—that is, the point of junction between the upper and lower parts is protected and sustained and the advantages set forth above are also more or less provided for. This central case R is generally made of large dimensions for the storage and handling of large amounts of material.

My invention consists, also, in constructing other controlling devices—viz, a jacket J, of porous or absorbent material, enveloping the case N and central case R, with means to cause liquids or fluids to flow upon or through the jacket J. For this purpose a preferable method is shown, and consists in providing the lateral flange *c* with perforations *p* and supplying the liquid or fluid to the chambers I through the orifice W in the outer cover E. To permit such flow and also to regulate its discharge, a flat ring or other packing *n* upon which the rim of the cover E rests is provided with corresponding perforations and is adjusted to correspond thereto or to partially close them. By these devices the case or cases and the contents may be kept cool or warm or otherwise affected in various ways—viz, by evaporation, by heating the liquid used, or by chemical or other action.

When desired to hermetically seal the cover E, the inlet-orifice W is closed and the packing *n* is adjusted to close the perforations *p*, and, if required, additional packing added, and the cover is then suitably secured, thereby making a sealed chamber I. This chamber I may also be utilized to aid in hermetically sealing and also to prevent the possible entrance of bacteria or spores by filling it with an antiseptic oil or other suitable substances through the orifice W and closing the orifice. Such substance placed in the chamber I may also be adapted to preserve the packing with which it comes in contact.

For the purpose of securing a more perfect and uniform diffusion of the liquids or fluids within and upon the jacket J, I connect pipes or conductors *p'* to the orifices *p* or to some of them and pass them into the jacket J and provide the pipes or conductors *p'* with orifices or outlets *s*. The forms of the pipes or conductors *p'* may vary from straight lines,

and they may also be enlarged at certain places, when desired, to increase the effects at such place or places.

Another feature of my invention consists in providing two or more interior vessels F, so as to nest within each other, with compartments or chambers between them, and providing the rims with flanges adapted to rest upon and be supported by the shoulder of the recess *a* in the projection A, with intervening packing between said rims. These vessels F are for the purpose of containing foods, liquids, and other substances. These interior vessels F permit access to one compartment or chamber at a time without disturbing the contents of the other compartments, so that a comparatively-small amount of the contents is exposed to the atmosphere at any one time. This is not attained in any preserving or storing vessel of which I have any knowledge, and is of great advantage to retail dealers and also to families. One or more of these vessels F may be made of different and permeable material, so as to permit the substances in them to act upon or affect each other through their walls by osmosis or otherwise, and such action may be mechanical or chemical, or both. It is mechanical, for example, where one or more of these vessels are permeable and the material placed in one. For example, alcohol permeates through the walls of one and dissolves material in the other. It is chemical, for example, where heat is generated in one so as to affect the contents of the other chemically. The use of various substances for such purposes is well known to those skilled in the art.

It is sometimes required that the case N shall be constructed in sections of different material—for example, the upper section translucent and the other opaque. This is required when it is desired to coagulate the upper portion of the material in the case without affecting the lower portion. Light also produces various other well-known effects, which may thus be utilized upon the upper portions without affecting the lower portions. It is also utilized for the purpose of observation, or the lower one may be infusible or refractory in case it is desired to heat externally. Where these materials cannot be united so as to make homogeneous or integral walls, I attach them hermetically together in any suitable manner. This is done preferably by a band P, in which the respective sections are held in place by screw-threads, as shown. The case N for many purposes may obviously be used independently of the central case R, with one or more of the various devices shown attached thereto in the drawings. For example, the case N, without the interior vessels F, the outer cover E, projection C, arm *c*, and jacket J, is peculiarly adapted to take the place of the ordinary preserving-jar, the chamber H, the plate G, and chamber *d* affording improved sealing devices and the projection B protecting the flange of the cover D. Made of large size

with all of its devices complete, as described, this case N furnishes improved means for storage of large amounts of food products, liquids, and other substances, in which they may be preserved indefinitely, and also an apparatus whereby the case may be cooled or warmed and changes take place through the porous walls of the vessels F, whereby the contents in one compartment are favorably acted on by the contents of another compartment, both to preserve and improve, it being well known that cold, heat, and chemical action destroys (more or less) the bacteria and spores which cause putrefaction and decay, and some food products, as well as other substances, fruit juices, and the like are preserved and improved by properly surrounding them with substances furnishing flavor, odors, and other elements.

Another feature of my device is providing means to rotate, move, or revolve the case N when used independently and also the central case R, and consists in providing such cases with journals placed at points opposite each other. This becomes necessary in many cases in preserving food products and the like, and also inducing chemical or other action between different substances contained, as described. The effect of rotary motion is well known in the preservation of eggs. It is also valuable where substances are combined which are likely to separate or settle, and thus disintegrate and spoil. An occasional rotation of the package prevents this, and the case is moved on such journals in any convenient way. I illustrate a preferable construction. The cover E is provided with a central projection M, adapted to serve as a journal, and another journal M is centrally located or attached to the other end of the case and opposite thereto. The cover E is provided with cogs *m*, integral or attached, preferably encircling the upper portion of the flange of the cover to afford means to agitate the package; but I do not confine myself to any particular means to move or agitate the case on its journals, as many methods well known may be used in combination with the journals M for such purposes.

The central case R, with its combinations as described, furnishes means whereby appropriate agencies and materials may be used for the objects first named; but it is evident that the use of such means will vary with the various articles to be operated upon and various changes described. Perhaps no two articles of food, for example, are best preserved in the same way, and an application of materials or agencies which will improve butter would destroy the flavor and consistency of strawberries. It is therefore impracticable to describe the precise methods of using these devices; but I have in the description of each of the various features of my invention described somewhat their several utilities. Other uses will readily occur to those skilled in the art.

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

1. The combination of a central case provided with one or more openings, with one or more cases constructed in sections placed through said openings partially within said central case and hermetically joined thereto, journals attached to the central case at opposite ends, adapted to support said case in position to be revolved when placed in bearings, means to rotate or agitate the inclosing case upon said journals, covers to the openings of the cases and means to hermetically seal them, interior vessels or chambers F, provided with rims adapted to rest upon and be supported by the shoulder of the interior recess *a* of the projection A, a plate adapted to fit in said recess and be supported by said shoulder, the lateral flange *c*, provided with perforations, a packing covering the upper surface of said flange *c*, provided with channels corresponding to the perforations through said flange *c*, connecting them with the chamber I, an outer cover provided with a flange adapted to form with the inner cover a space or chamber extending around its inner surface, pipes *p*, provided with small orifices connected to said perforations in said lateral flange and extending into a jacket of porous or absorbent material enveloping the case or cases externally, suitable packing material placed between the parts requiring sealing, and means to secure the covers.

2. The combination of a case provided with a neck or opening, with a projection attached thereto constructed with an interior recess upon its upper inner surface of sufficient depth to receive the rims of interior vessels and a plate so as to form a chamber between said plate and a cover placed on the projection and also constructed with an exterior recess upon its lower exterior surface and also with a lateral flange extending out from its lower end, adapted to form a seat for the rim of a cover, interior vessels or chambers F, provided with rims or flanges adapted to rest upon and be supported by said shoulder within the interior recess of said projection, a plate adapted to fit in said recess and be supported by said shoulder, a cover provided with a flange adapted to closely envelop that part of the projection opposite the said interior recess and to form with the said lower part of said projection and its arm a closed space or chamber and means to secure the cover, a second projection adapted to receive the flange of said cover and closely envelop the same, a lateral flange attached to the neck of the case or to said second projection and extending therefrom so as to form a seat for the rim of an outer cover and a space between said rim and its said attachment for perforations through said lateral flange, a packing covering the upper surface of said lateral flange, provided with perforations or channels corresponding to the perforations through said flange, an outer pro-

jection attached to said lateral flange adapted to closely envelop the flange of an outer cover, an outer cover provided with a flange adapted to form with the inner cover a space or chamber extending around its interior surface enveloping the case or cases externally, suitable packing material placed between the parts requiring sealing, and means to secure the covers.

3. The combination of a case provided with an opening, with a projection attached thereto constructed with an interior recess upon its upper inner surface of sufficient depth to receive the rims or flanges of interior vessels and a plate so as to form a chamber between said plate and a cover placed on the projection and also constructed with an exterior recess upon its lower exterior surface and also with a lateral flange extending out from its lower part, adapted to form a seat for the rim of a cover, interior vessels or chambers F, provided with rims or flanges adapted to rest upon and be supported by said shoulder within the interior recess of said projection, a plate adapted to fit in said recess and be supported by said shoulder, a cover provided with a flange adapted to closely envelop that part of the projection opposite the said interior recess and to form with the said lower part of said projection and its lateral flange a closed space or chamber, suitable packing material placed between the parts requiring sealing, and means to secure the covers.

4. The combination of a case provided with an opening, with a projection attached thereto constructed with an interior recess upon its upper inner surface of sufficient depth to receive the rims or flanges of interior vessels and a plate so as to form a chamber between said plate and a cover placed on the projection and also constructed with an exterior recess upon its lower exterior surface and also with a lateral flange extending out from its lower part, adapted to form a seat for the rim of a cover, a plate adapted to fit in said recess and be supported by said shoulder, a cover provided with a flange adapted to closely envelop that part of the projection opposite the said interior recess and to form with the said lower part of said projection and its arm a closed space or chamber, suitable packing material placed between the parts requiring sealing, and means to secure the covers.

5. The combination of a case provided with an opening, with a projection attached thereto constructed with a recess upon its lower exterior surface, a lateral flange extending out from its lower part and adapted to form a seat for the rim of a cover, a cover provided with a flange adapted to closely envelop the upper part of the projection and to form with the said lower part of said projection and its lateral flange a closed space or chamber and means to secure the cover, and suitable packing material placed between the parts requiring sealing.

6. The combination of a case provided with

an opening, with a projection attached thereto constructed with a recess upon its lower exterior surface, a lateral flange extending out from its lower end and adapted to form a seat
 5 for the rim of a cover, a cover provided with a flange adapted to closely envelop the upper part of the projection and to form with the said lower part of said projection and its lateral flange a closed space or chamber and
 10 means to secure the cover, a second projection adapted to receive the flange of said cover and closely envelop the same, and suitable packing material placed between the parts requiring sealing.
 15 7. The combination of a case having a cover with a lateral flange attached to the neck of the case or to a projection and extending therefrom so as to form a seat for the rim of a second or outer cover and a space between
 20 said rim and its said attachment, a second or outer projection attached to said lateral flange, adapted to closely envelop the flange of an outer cover, an outer cover provided with a flange adapted to form with the inner cover
 25 a space or chamber extending around its interior surface, perforations through said lateral flange, and a jacket of porous or absorbent material enveloping the case.
 30 8. The combination of a case having a cover with a lateral flange attached to the neck of the case or to a projection and extending therefrom so as to form a seat for the rim of a second or outer cover and a space between
 35 said rim and its said attachment, an outer cover provided with a flange adapted to form with the inner cover a space or chamber extending around its interior surface, perfora-

tions through said lateral flange, and a covering of porous or other absorbent material enveloping the case. 40

9. The combination of a central case with one or more cases placed partially therein through openings in said central case and hermetically joined thereto, with means to
 45 hermetically seal the openings of the inserted cases.

10. The combination of a case provided with a cover and means to hermetically seal the cover, with a projection attached to the opening of the case constructed with a recess
 50 and shoulder on its upper interior surface, and two or more interior vessels provided with rims adapted to rest upon and be supported by said shoulder within the interior recess of said projection. 55

11. In a central case adapted to receive and contain other cases and vessels, the combination of journals adapted to support the central case in position to be revolved, the hermetical sealing devices herein described, the
 60 case N, constructed in sections as described, two or more interior vessels F, adapted to rest within each other, with spaces between them and provided with flanges adapted to rest upon and be supported by the shoulder
 65 of the recess *a*, the jacket J, and means to cause liquids or fluids to flow upon and through said jacket.

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

ALBERT BAKER.

Witnesses:

H. C. HARTMAN,
 D. C. FISHER.