

(No Model.)

2 Sheets—Sheet 1.

A. BAKER.  
PACKING AND STORING VESSEL.

No. 587,050.

Patented July 27, 1897.

Fig 1

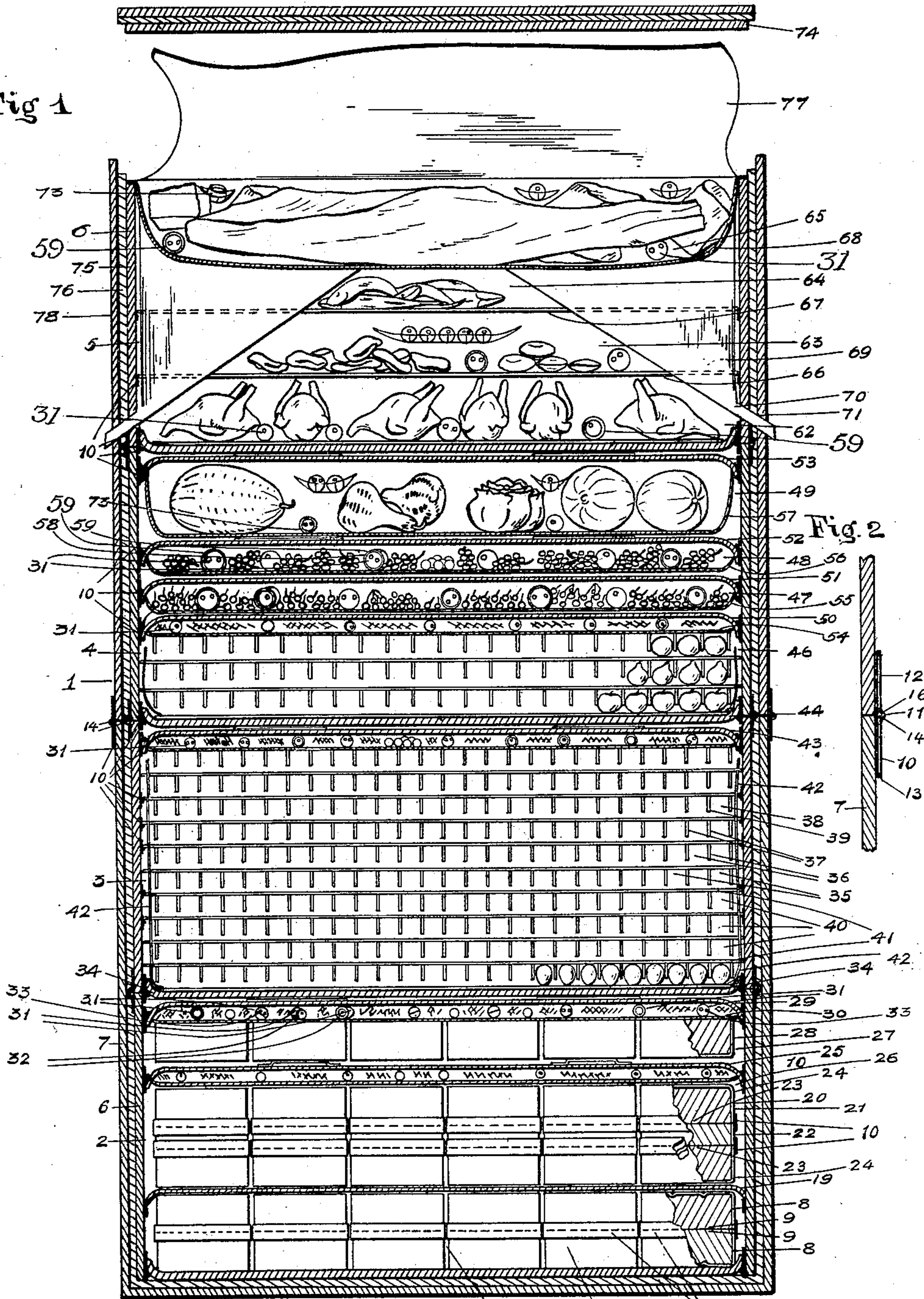


Fig. 2

WITNESSES:  
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*William C. Ryan*

INVENTOR  
*Albert Baker*  
BY  
*H. C. Hartman*  
His ATTORNEY.



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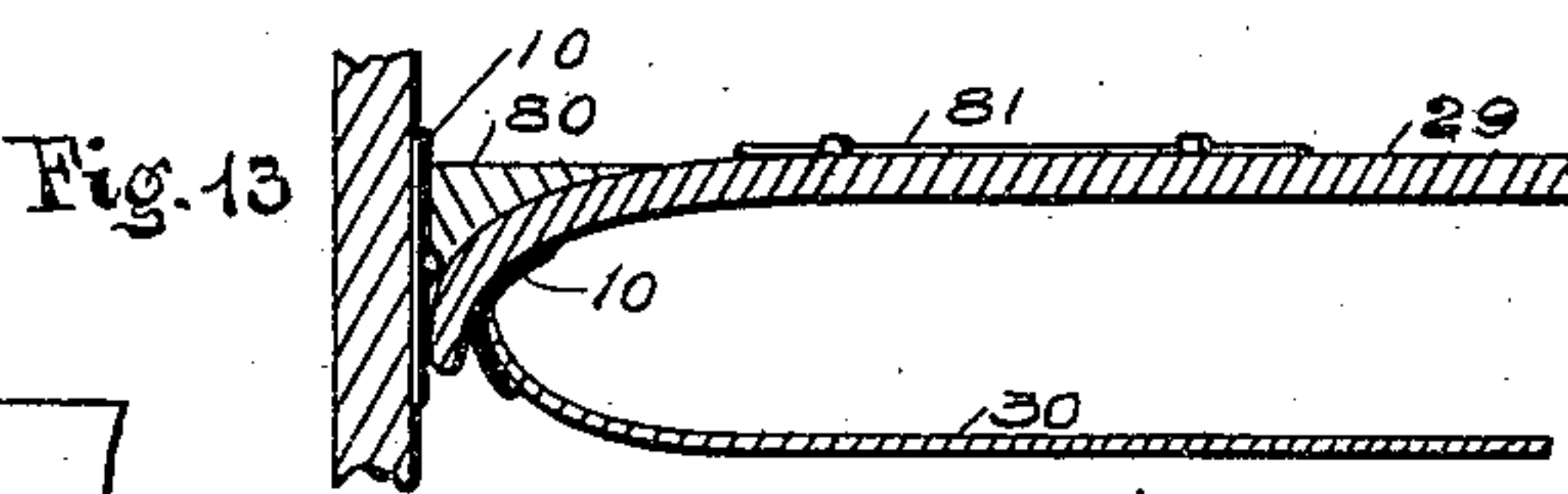
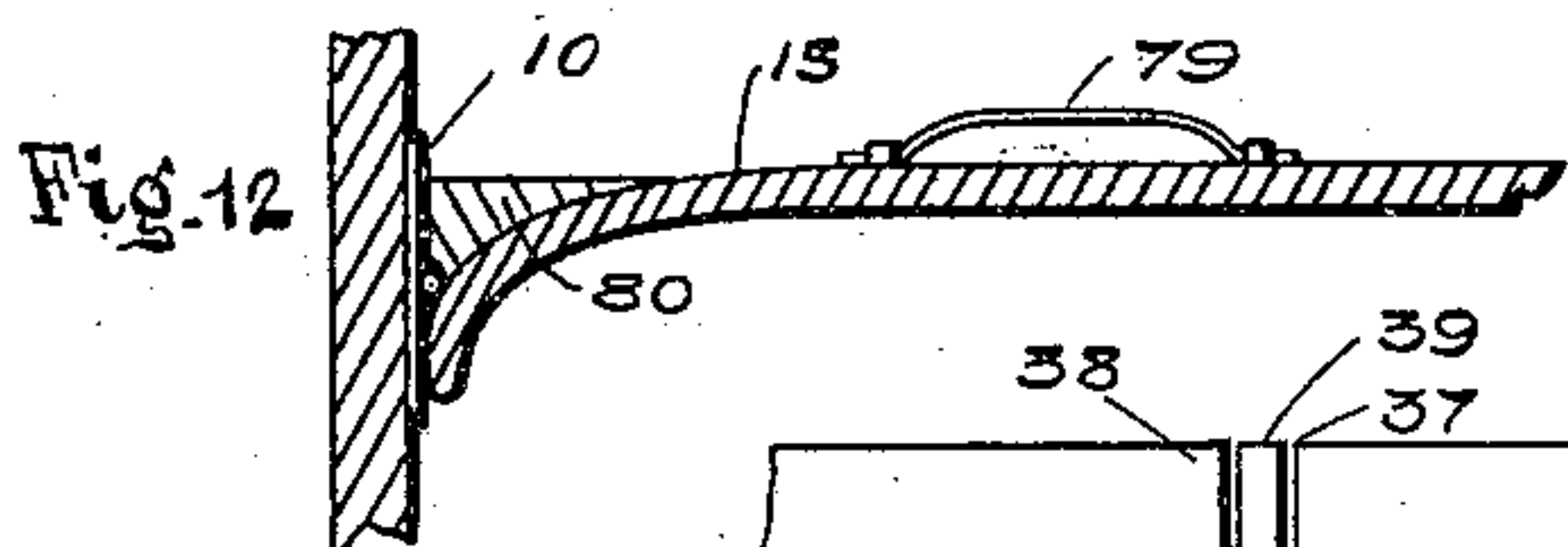
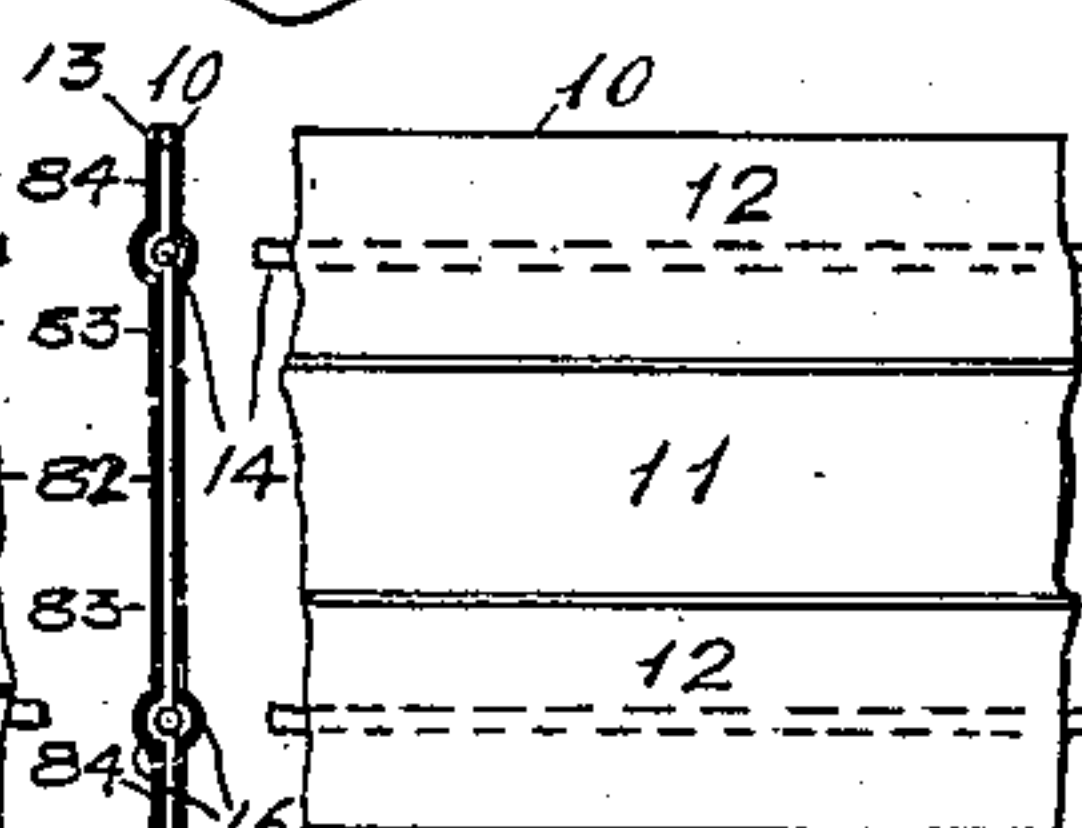
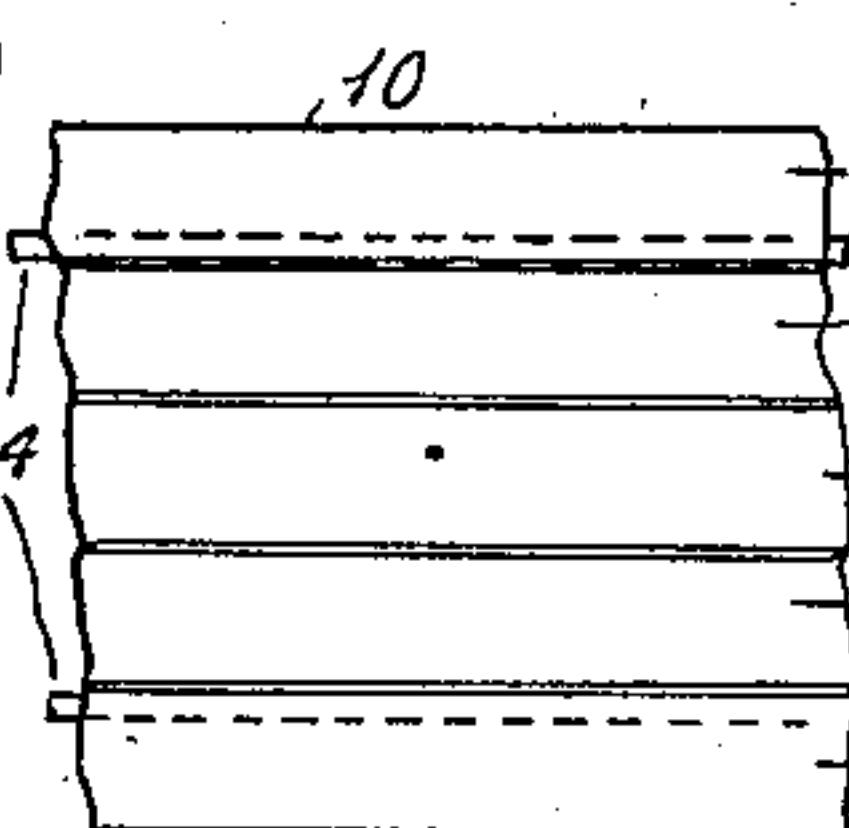
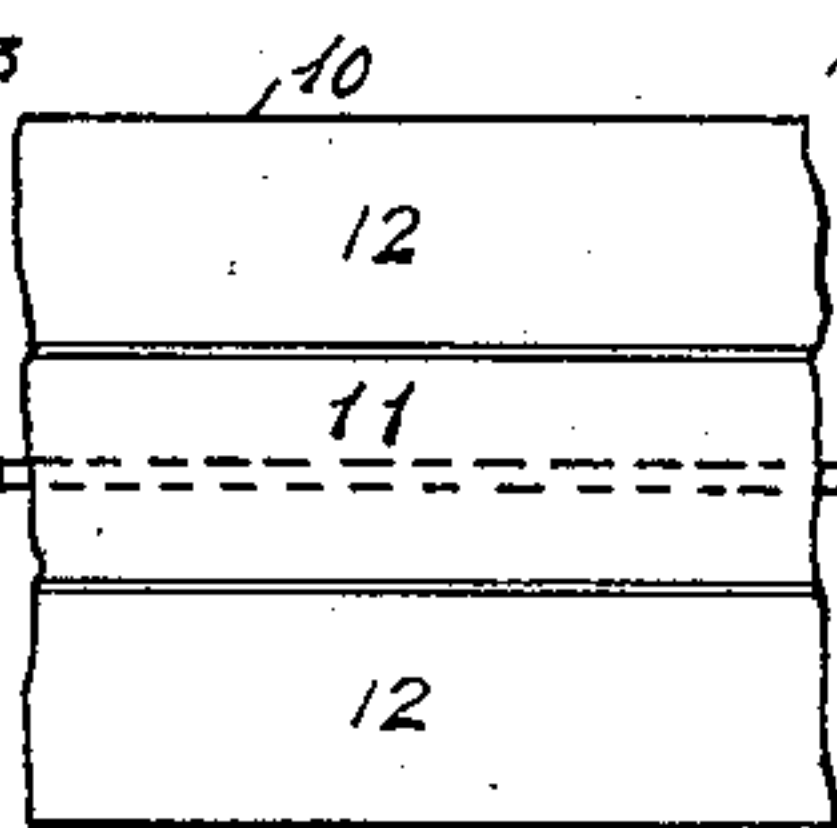
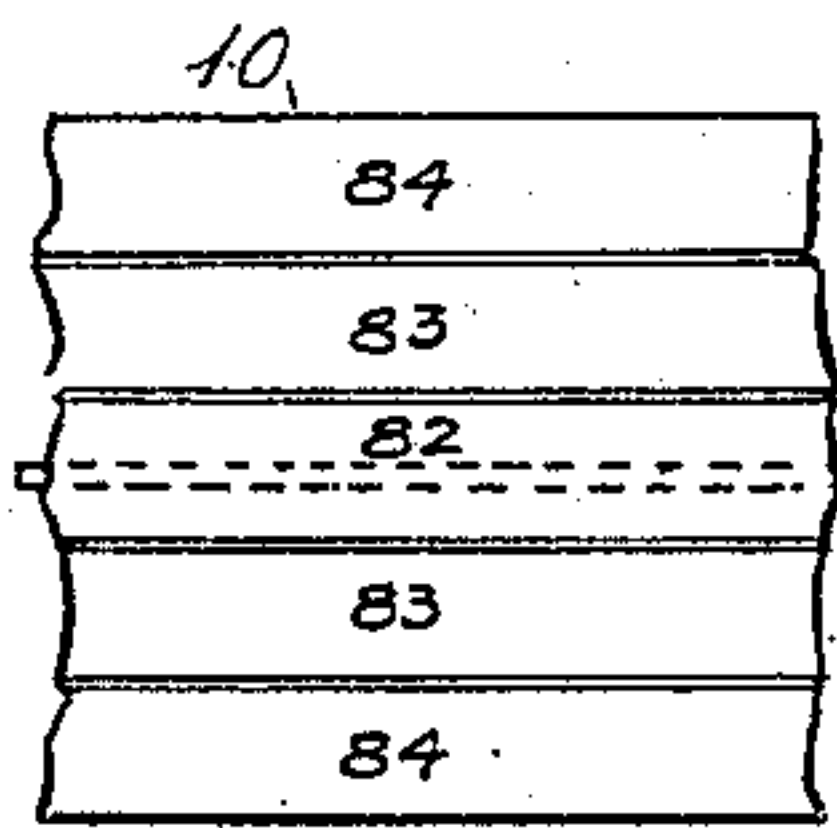
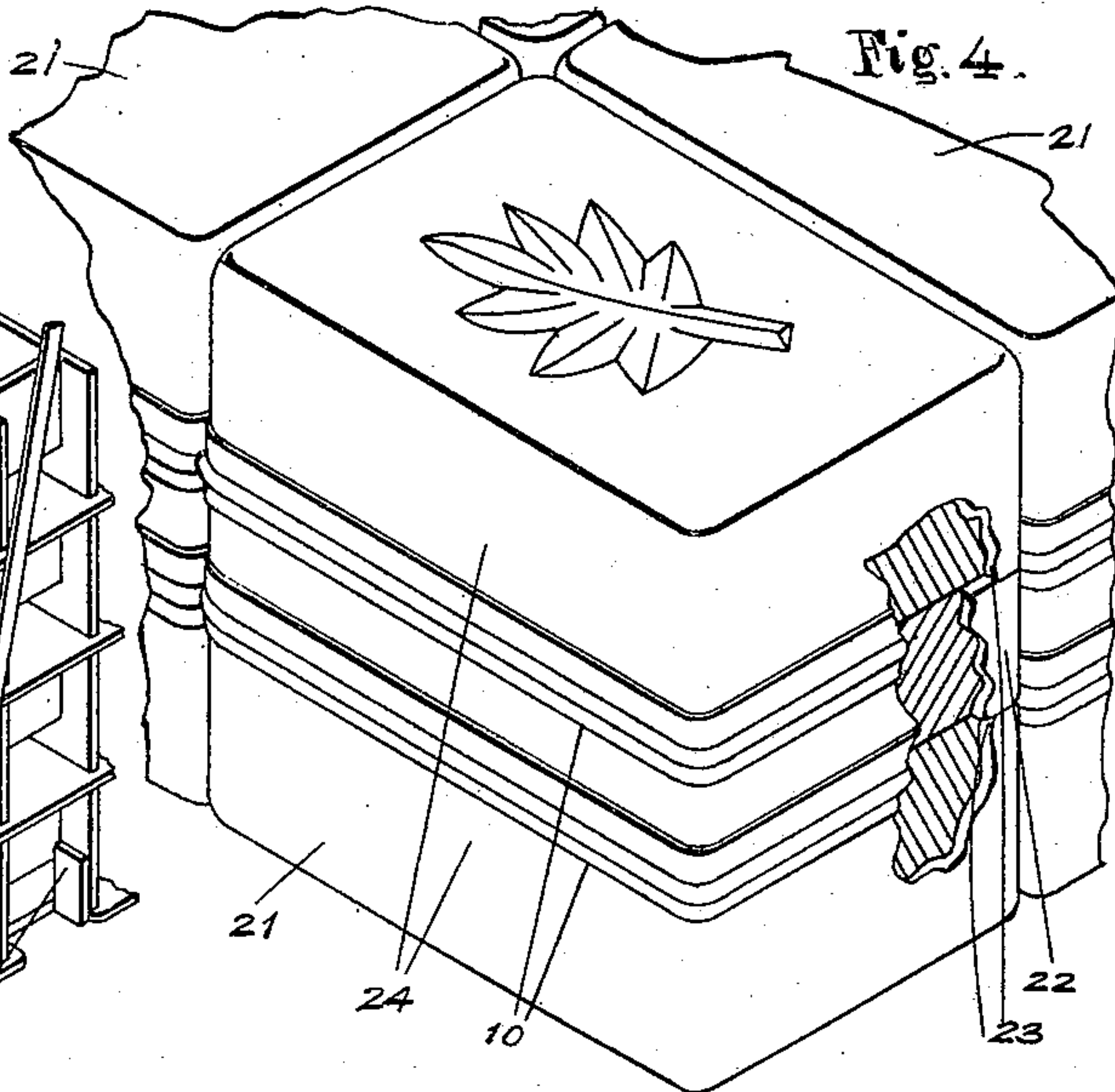
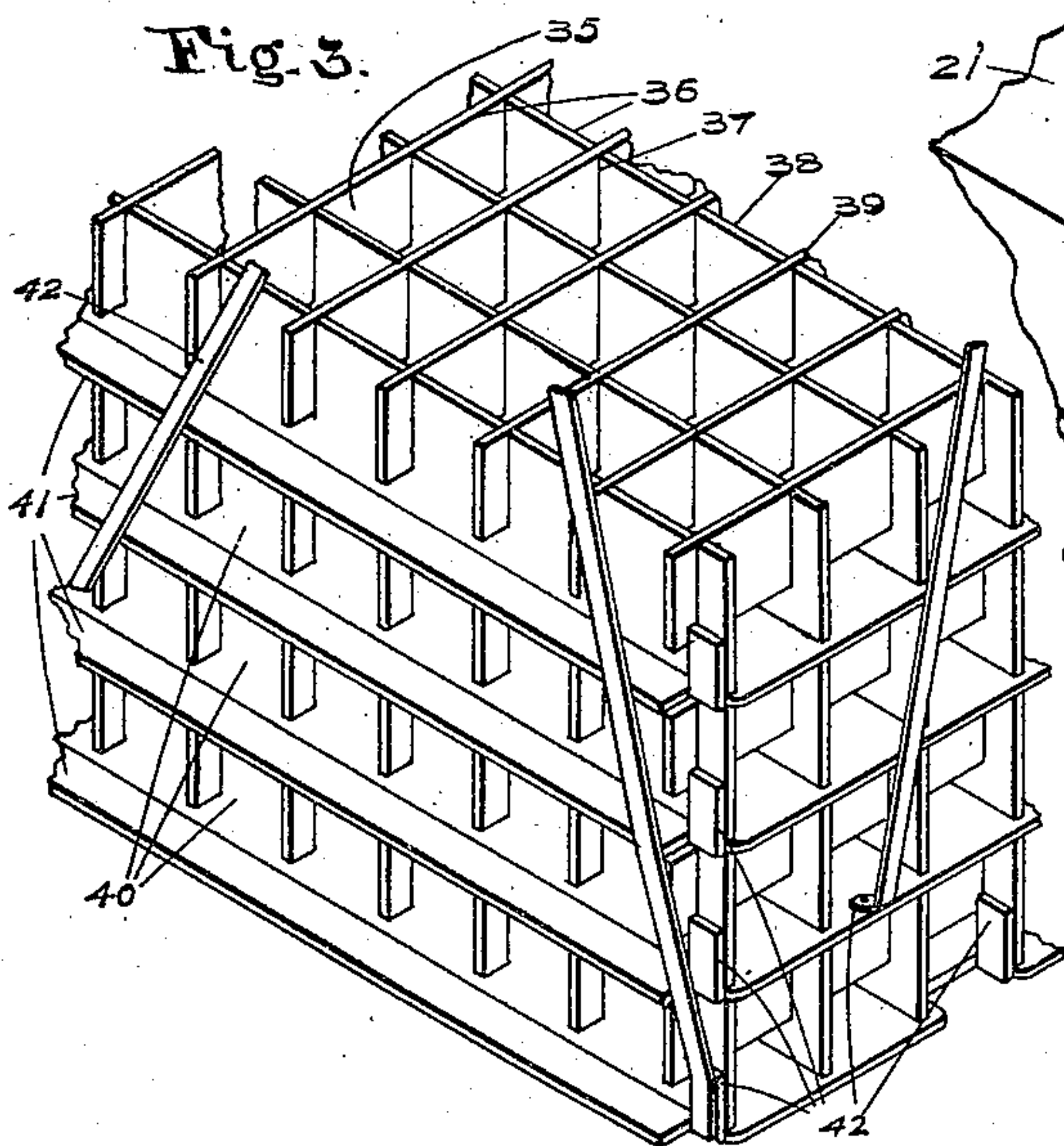


Fig. 14.

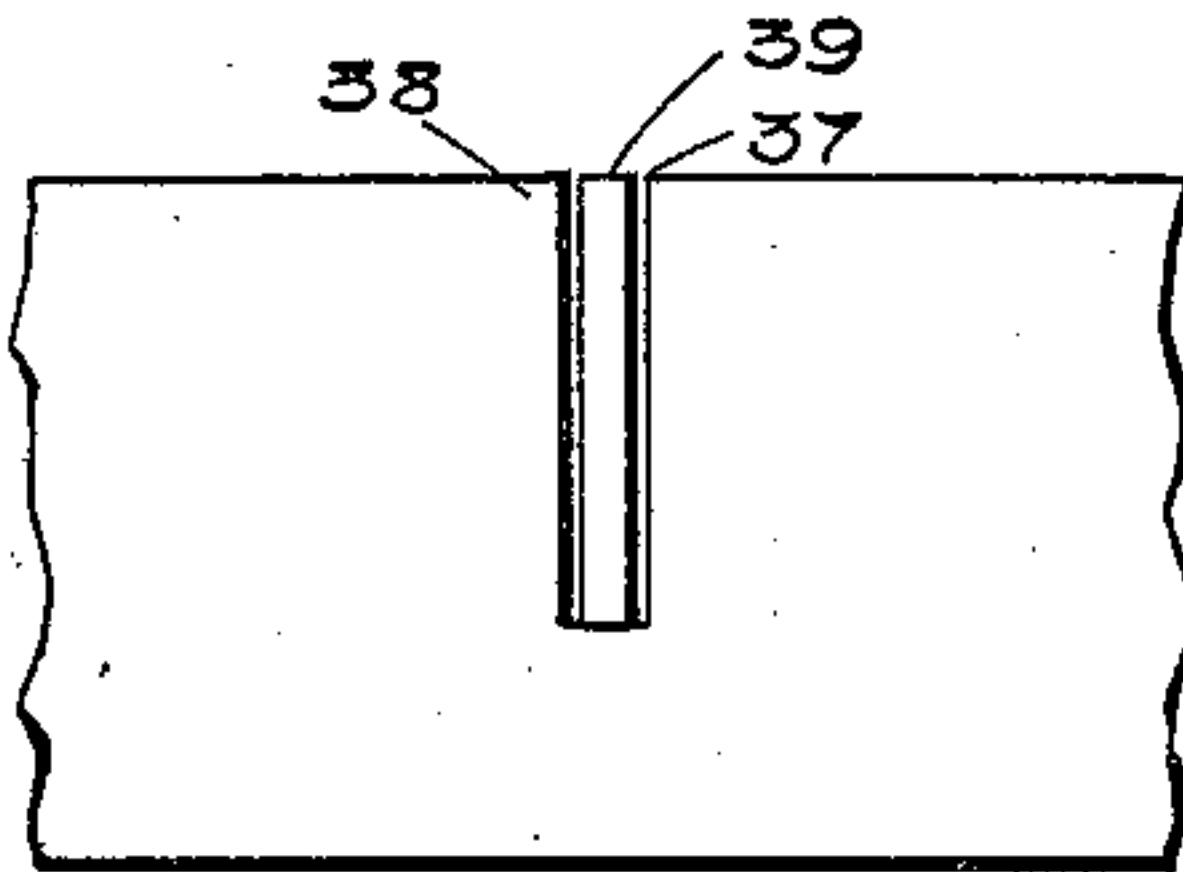
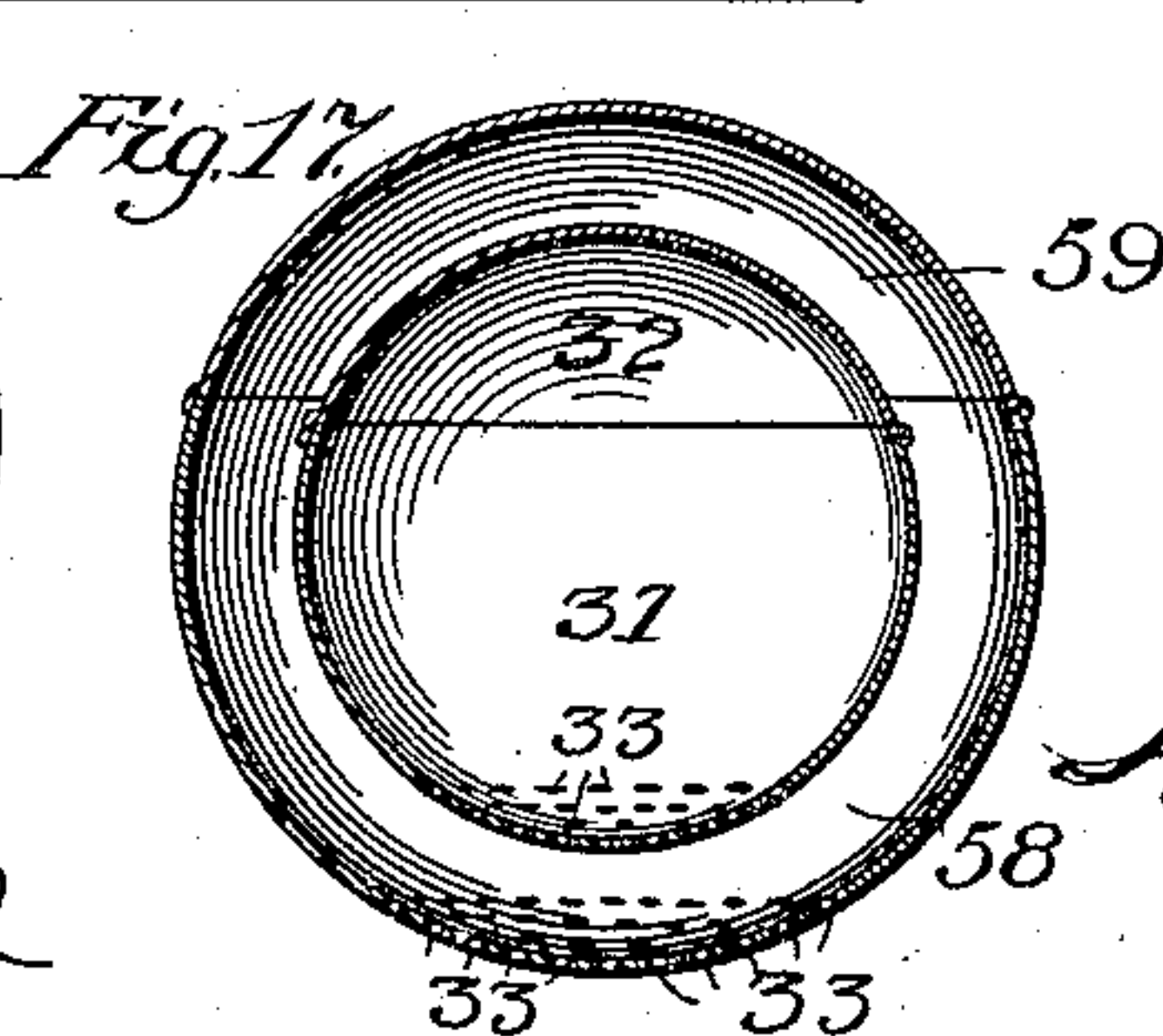
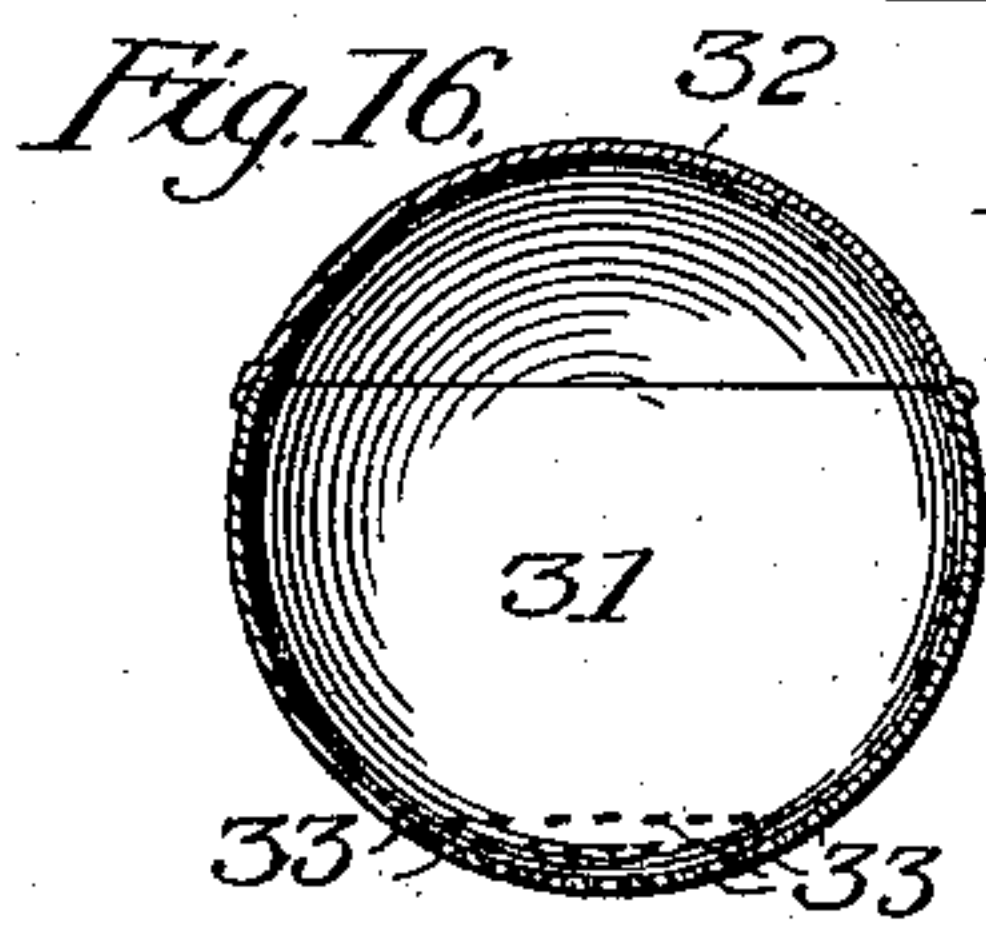
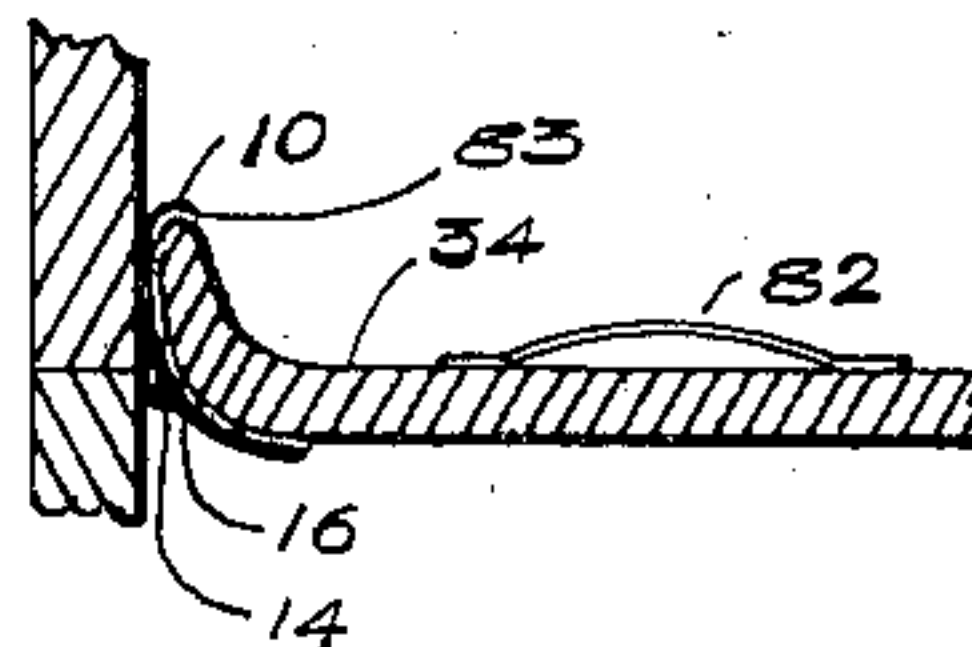


Fig. 15.



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# UNITED STATES PATENT OFFICE.

ALBERT BAKER, OF FORT WAYNE, INDIANA, ASSIGNOR OF ONE-HALF TO  
WILLIAM S. HULSE, OF SAME PLACE.

## PACKING AND STORING VESSEL.

SPECIFICATION forming part of Letters Patent No. 587,050, dated July 27, 1897.

Application filed April 10, 1896. Serial No. 587,016. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT BAKER, a citizen of the United States, residing at the city of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Packing and Storing Vessels, of which the following is a specification.

My invention relates to improvements in packing and storing vessels which are adapted for the preservation and transportation of provisions; and the objects are to provide a more convenient case for the packing and transportation of provisions, better adapted for long storage and preservation and for controlling the conditions of the contents and for permitting the use of means to improve or modify the substances inclosed without disturbing the package; and the invention consists in the construction and novel combination of parts hereinafter described, pointed out in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the entire device. Fig. 2 is a cross-section of the packing-band attached to a wall of the case. Fig. 3 is a detail showing construction of the egg-fillers. Fig. 4 is a detail of part of the outside of cases, showing attachment of packing-band. Figs. 5, 6, 7, 8, 9, 10, and 11 are details of the packing-band. Figs. 12 and 13 are details showing application of the packing-band to partition-plates and diaphragms. Fig. 14 is a detail of partition of egg-filler, and Fig. 15 is a detail of partition-plate attached to wall of case. Fig. 16 is a sectional view of the single capsule, and Fig. 17 a sectional view of a double capsule.

Similar numerals of reference refer to similar parts throughout the several views.

One of the features of my invention is a packing-band 10, which is constructed as follows: It is composed of a flat strip or band of flexible fabric suitably prepared to receive coatings of different kinds of adhesive materials. In the present instance it is a cotton braid prepared by coating with shellac varnish. Suitably prepared, it is then coated with at least two different kinds of adhesive materials in at least three separate longitudinal stripes, each stripe adjoining one of a different kind. One of these adhesive stripes

is of a kind to be affected by moisture, another stripe is of a kind to be affected by heat, and when only two different kinds of adhesive substances are used they are preferably of the kinds named, and the central stripe 11 is of the kind affected by heat, the other two stripes 12 on each side of it of the kind affected by moisture. In the present instance the central stripe 11 or coating is of asphaltum and the two outer stripes 12 or coating are of soft mucilage. If further coatings are desired, one or more of the stripes may be of a substance made adhesive by chemical action, and there are in such cases as many different stripes as there are different substances used. For some uses these coatings are on both sides of the prepared fabric 13. In the present instance such is the construction where the packing-bands support and seal the partition-plates. And I further provide means for strengthening and stiffening the packing-bands, preferably by a firmly-braided cord 14, which is covered by the coatings or inserted within the fabric. When the packing-bands are used to secure the partition-plates 15 and for like purposes, this cord 14 is placed centrally and the central coating is applied so as to form a wedge-shaped projecting ridge 16 on both sides of the cord.

My complete package consists of a combination of several separate compartments 2, 3, 4, and 5, inclosed together in one outside case 1, for handling and transportation of provisions. My preferable complete package consists of four such compartments 2, 3, 4, and 5 in one case 1, as shown in Fig. 1, the whole adapted to the storage of four different classes of foods and provisions, classified according to the different conditions required for handling, preservation, and transportation of each. For example, eggs require a different sort of compartment and treatment from that for butter, fruits a different one from either, meats a different arrangement from the others named, and for joint handling and transportation their combination in one case which conserves all is a great economy and convenience. These compartments consist alike of outside shells or cases 6, within which are respectively arranged and constructed the means for preservation and handling and to



permit the use of controlling elements—that is, the use of packings, such as brines, salts, and other liquids, and the use of preserving substances, flavorings, and odors in such a manner that their influences or energies may be applied slowly and continuously or accelerated at pleasure after the outer package is sealed up, as hereinafter described.

The lower or first compartment 2, Fig. 1, is a case made of waterproof material and adapted to fit snugly in the outside case 1. This compartment is primarily intended for storage of butter and similar substances. The interior constructions are as follows: Two receptacles or vessels 8 are packed with butter, and their open ends 9, which are constructed to coincide with each other, are placed together, the one vessel over the other, so that they mutually close each other. They are then secured in that position and sealed by the packing-band 10, described above. A tier 17 of these double vessels 18 is thus arranged on the bottom of the compartment. A diaphragm 19 is then placed over the tier so arranged, and above that another tier 20 of double vessels 21, provided with a band 22, separating their open ends 23 from each other, is arranged thereon. This band 22 is of any suitable material. The preferable material for the bands 22 and vessels 24 is glass, because of its transparency. This band 22, packed with butter specially treated, is placed between the two open ends 23 of two vessels 24, packed with butter, and the whole is secured in place and sealed by the use of packing-bands 10, as before described. A particular advantage of the use of the band 22, in addition to those above suggested, is that the amount of the butter specially treated is small compared with the whole amount and is therefore a more economical means of obtaining an improvement of the whole mass. Above this second tier of vessels a diaphragm 25 is placed. The subcompartments 26 formed by the diaphragms are filled with salt, brine, and other suitable packing, so that all the interstices between the subcases or vessels are filled. This last-described diaphragm 25 is secured to the walls of the compartment and sealed thereto by the use of the packing-band 10, above described. The method of attachment is obvious from the description of the band. Above and upon this attached diaphragm 25 I place a tier 27 of uncovered vessels 28, packed with butter, filling the area. Above such tier 27 I place a double diaphragm 29 and 30, the edges of both of which are attached to the walls of the compartment. The lower of these diaphragms 30 is made of porous material or loose fabric, so that substances resting upon it filter through, so as to affect the butter below. The particular substances used for such purposes are selected by the operator according to his skill and experience in handling butter. I also place upon any of the diaphragms and directly upon the articles of food, as may be desired, spherical cells or capsules 31, contain-

ing substances to affect the foods upon which they are discharged. These cells or capsules 31 are made of any suitable substances, in the present instance of gelatin, and are provided with a closed cover 32 for the insertion and retention of their contents and also with orifices 33 for discharge of their contents gradually and slowly. The discharge is effected by the gradual diffusion of the substance through the orifices 33, and may be aided by the agitation of the package, causing the cells to oscillate or rotate. The substances inclosed in the capsules 31 are selected by the operator to affect the contents of the compartments by adding odor, flavor, and preservative material as may be by him desired.

For some kinds of food and fruit I use the double capsule 58, constructed as follows: A single capsule 31, constructed as described, is inclosed within another capsule 59, large enough to hold it and also material for distribution of a different kind from that contained in the inner capsule 31, and such as may be affected chemically or otherwise by the mixture of the contents of the inner capsule, so that the substances discharged will be a combination chemically or mechanically of the two different substances in the inner and the outer capsule, such combination being effected gradually and slowly as the inner capsule discharges. The outer capsule 59 is likewise provided with orifices for discharging. This compartment is closed by a partition-plate 34, forming its cover. I use the term "partition-plate" because it is obvious that the compartment 2 may be formed of the lower part of the outside case 1, in which construction the cover would be a partition-plate. Such construction is not my invention.

When the partition-plate 34 is a true partition, the packing-band 10, constructed with the central cord 14 longitudinally, as described, is first attached by moisture and then by heat to the walls of the case. The partition-plate 34 is then placed on the wedge projections 16 of the band 10, and heat being applied the asphaltum is softened, so that its edges are embedded in it. As the plate is supported by the cord the upper stripe 83 is then forced down over and upon the edges of the partition-plate and attached by subjection to moisture. The parts are then dried and the plate 34 is then secured hermetically in place. It is obvious that its removal can be easily and readily effected. In the second compartment a handle 82, as shown, assists in aiding this object.

The second compartment 3 is formed of a separate case, preferably, but may be a part of the main case separated from the other compartments by partition-plates 34 and 44, secured and attached as above described. Its internal constructions are a subdivision of the entire space into square cells or receptacles 35 for holding one egg each, similar to the ordinary egg-filler; but I construct the



partition-walls 36 of these cells or receptacles of waterproof material practically odorless and flavorless and of such gravity that the filler will sink in strong brine. In the present instance these walls 36 are made of wood thoroughly coated with shellac and glass. The partition or slats forming these cells are let past each other by slots 37 at their point of junction, but the slots 37 are cut deeper than those in the common egg-carrier, and the partition-wall 36 is of more elastic material, whereby there is greater elasticity in the frame to accommodate various-sized eggs and hold them with less pressure and liability of motion in the cell. I use wood prepared to furnish the above conditions, in the present instance by a thorough coating of shellac, for the partition-bars 38 running one way, and glass for the cross-partition bars 39, both partition-bars being made more elastic for the purpose named by the deeper slots 37 in the wooden bars. Thus constructed the compartment is filled with a series of such trays or egg-fillers 40, one above the other, and I place beneath each tray or egg-filler 40 diaphragms 41, which form bottoms, and provide the fillers 40 with suitable handles 42 as means to lift one or more of them with their contents, separately or together, out of the compartment, as may be desired. After packing and placing within the outer case the compartment is filled with brine, so as to completely submerge all the eggs. I also place above these trays in the same compartment a double diaphragm 43, constructed, secured, and attached as before described, for the purpose of holding and distributing material favorably affecting the preservation and quality of the eggs. The compartment is then closed by a cover 44 or a partition-plate in like manner as the first compartment.

The third compartment 4 is for the storage of fruits and like foods. This compartment may be constructed so as to form a separate one in the main case or a removable one. This compartment is divided into subdivisions 46, 47, 48, and 49, one above the other, by the use of diaphragms 50, 51, 52, and 53, attached and loose, according to the character of the different fruits inclosed and the methods of packing. Where the odor or exhalations of one kind of fruit or food would affect the food or fruit in another subdivision, the diaphragms 54, 55, 56, and 57 are of impervious material and secured and attached by packing-bands 10, as described, to completely separate them. Otherwise loose diaphragms are used. I also use attached diaphragms 50 to hold the capsules 31.

The fourth and upper compartment 5 is formed similarly to the others. The subdivisions 62, 63, 64, and 65 of this compartment are made by the use of diaphragms 66 and 67, both attached and loose. The upper subdivision is formed by the attached diaphragm 68, in the form of a sack, as shown in Fig. 1:

Flaps 69 are attached integrally or otherwise to the diaphragm 68 in such a manner as to form drains to deflect water from melting ice and carry off impurities to the lower edges 70 of the compartment, where they are provided with a suitable outlet 71 for discharging their contents outside of the main case. This upper compartment is closed by a cover 74, similarly to that of the first compartment hereinbefore described.

The main or outside case 1 incloses all the compartments with closely-fitting walls. Its walls are composed of layers of different material adapted to completely isolate the inclosed provisions from the action of all outside influences of cold, heat, moisture, and other agencies, and also to preserve the integrity of the entire package. In the drawings I have used glass 75 for the inner lining or layer 6, next to that a packing of transparent paper 76, and outside another glass layer 78, making triple walls, the whole suitably joined and hermetically sealed. In the case illustrated I have preferred transparent walls for the purpose of affording facilities of display and observation. In cases for rough transportation different materials adapted to such use are preferred; but the walls in all the main or outside vessels are constructed with an inner wall 6 and an outer wall 7, with packing 76 between them.

The mode of operation is described or suggested in the above description of the details and in the drawings. Generally the complete package, as shown in Fig. 1, is stored with various kinds of food, as described, the whole being hermetically sealed. It is then ready for transportation and delivery to a family for domestic use or to a retail dealer and contains an assortment of articles of food of different kinds. Where the separate apartments are used apart from the main case, each has a separate outside protecting-case of its own. These complete cases can have their compartments of such sizes relative to each other as to contain an assortment of foods in just such relative quantities as to supply a family for a limited period—say one or two months, or more—and they can be refilled as desired according to the description herein given of the various details.

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

1. In a storing-case in which two separate parts require to be attached and sealed, the one to the other, the combination with said two parts of a packing-band, composed of a strip or band of flexible material, coated with the two or more stripes longitudinally of different kinds of adhesive material, each being made adhesive by subjection to different elements respectively.

2. In a packing and storing vessel, a packing-band composed of a flat strip or band of flexible material coated with two or more stripes longitudinally of different kinds of



adhesive material each kind made adhesive by subjection to different elements respectively, and a cord for strengthening and stiffening the same longitudinally placed underneath the coatings.

3. In a packing and storing vessel in which compartments for different kinds of food are placed, a removable compartment-case of waterproof material adapted to fit snugly in said vessel provided with interior receptacles or vessels and suitably sealed so that one closes the other in series, the whole forming a tier of double vessels in the compartment-case, a diaphragm placed over said tier, a second tier of vessels 21, provided with a band separating the open ends from each other, and adapted to hold a portion of the provisions, the two vessels and band sealed to each other as described, a diaphragm placed above said second tier secured to the walls of the compartment-case as described, a third tier of open or uncovered vessels 28, a double diaphragm 29 placed above said third tier and secured to the walls of the compartment-case, the lower diaphragm being made of porous material.

4. In a packing and storing vessel, a sub-vessel consisting of two parts adapted to hold provisions, their open ends of similar size and shape, a band placed between the open ends of said two parts adapted to hold a portion of the provisions, and packing-bands adapted to secure and hermetically seal them in position.

5. In a packing and storing vessel in which compartments for different kinds of foods are placed, a removable compartment-case, 3, adapted to fit in said vessel provided with partitions subdividing the case into tiers of square cells, the partitions being made of waterproof material practically odorless and flavorless, and so constructed as to permit a slight movement and have some elasticity, a diaphragm placed between the tiers, means to lift the tiers or fillers out separately, or one or more together—and two diaphragms placed above all the tiers, the lower one of which is porous, adapted to hold between them substances to be diffused through the lower double diaphragm into the cells below.

6. In a packing and storing vessel in which compartments for different kinds of foods are placed, a removable compartment-case adapted to fit in said vessel provided with diaphragms, adapted to separate provisions from each other, and to be secured hermetically to the walls of the compartment and capsules 31 placed between them.

7. In a packing and storing vessel in which compartments for different kinds of foods are placed, a movable case subdivided by a diaphragm into subcompartments, the diaphragm being arranged to form a sack which is provided with flaps to form drains to carry off the water from the sack through a tube leading to the outside of the case.

8. In a packing and storing vessel, double

capsules 58, consisting of one capsule enclosed within another, and preserving material placed between them and held in place by the outer capsule.

9. A packing and storing vessel consisting of the outside case 1 as described, containing four interior compartments all adapted to fit snugly in said outside case, the first compartment being provided with two vessels with a tier of double vessels constructed to coincide with each other so as to mutually close each other and secure the packing-band and also provided with a diaphragm over said tier and also provided with another tier of double vessels provided with a ring-section separating their open ends from each other and secured by the packing-band, and upon these a diaphragm to separate and secure said tier in place and above this a double diaphragm the lower wall of which is adapted to permit substances to diffuse through it, and a cover or partition to such compartment: a second compartment provided with square cells adapted to form egg-fillers constructed of wood thoroughly coated with waterproof material for partition-walls running one way and of glass for partition-walls running the other way: a third compartment divided into subdivisions by the use of diaphragms: and a fourth compartment also divided into subdivisions by the use of diaphragms and also provided with an upper diaphragm adapted to form a sack which is provided with a drain to deflect and carry off the water from melting ice outside of the case: capsules adapted to contain substances and provided with means for their slow and gradual discharge into the contents of the various compartments where they may be placed.

10. In a packing and storing vessel, a compartment-case adapted to hold brine and other watery solutions, provided with tiers of square cells for eggs, filling the case, the partitions of which are made of water and brine proof material practically odorless and flavorless and of sufficient gravity to sink in the brine and hold down the diaphragm or partition plates, placed between the tiers.

11. In a packing and storing vessel, a partition-plate in combination with a packing-band composed of a flat strip or band of flexible material coated with three or more stripes longitudinally of different kinds of adhesive material each made adhesive by subjection to different elements respectively, and a cord placed between the coating and the band or through its meshes adapted to form a shoulder for the partition-plate to rest on and be attached to.

In testimony whereof I hereunto subscribe my name, in the presence of two witnesses, this 6th day of April, A. D. 1896.

ALBERT BAKER.

Witnesses:

H. C. HARTMAN,  
GERTRUDE HUSTON.