

[54] **LIVESTOCK CONTAINER**
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2,722,910 11/1955 Sundstrom.....119/19
 3,122,127 2/1964 Shechmeister et al.....119/18
 3,343,520 9/1967 Schwarz, Jr.....119/15

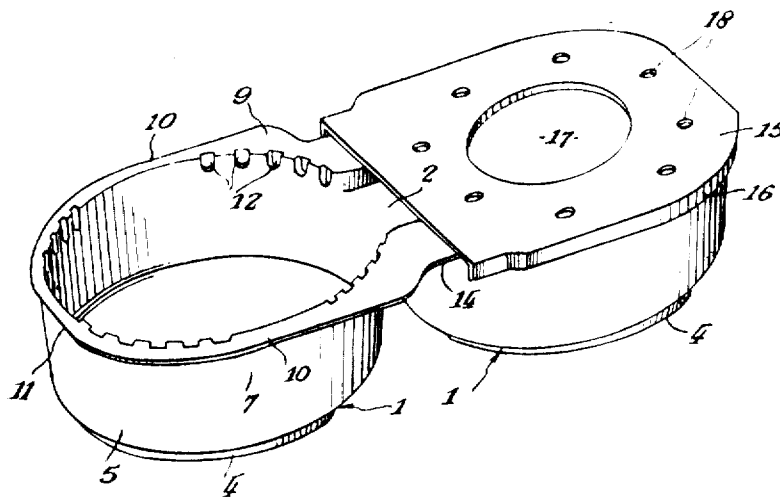
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[57] **ABSTRACT**
 A container for transporting livestock which comprises at least two livestock containing chambers connected together in side-by-side relation each chamber being cup-shaped and of substantially circular cross-section and having a lid-retaining flange round its open end and a number of ventilation apertures arranged round the upper portion of its wall below the said flange, and a lid for each chamber, said lid having a dependent flange for engagement with the lid retaining flange of the chamber, the flange on the lid being of sufficient depth to cover the wall of the chamber to a level below the bottom of the ventilation apertures and being so formed that when the chamber is covered with the lid a space through which air can flow into the chamber via the apertures is left between the wall of the chamber and the flange on the lid.

[56] **References Cited**
UNITED STATES PATENTS
 2,988,044 6/1961 Adelberg et al.....119/15
 3,108,569 10/1963 Kundikoff.....119/19
 2,422,438 6/1947 Richards.....119/19
 2,467,525 4/1949 Fricke.....119/15

10 Claims, 5 Drawing Figures



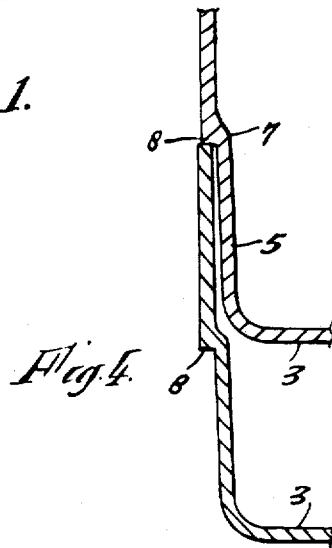
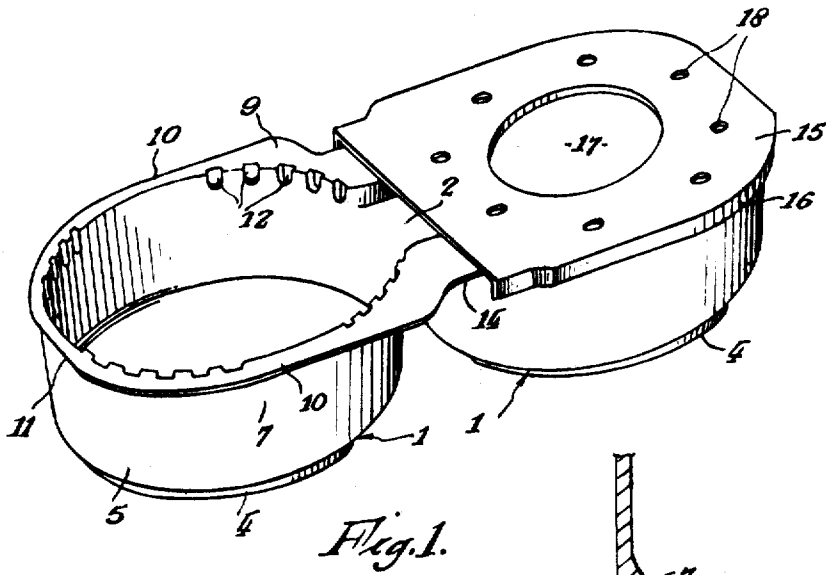
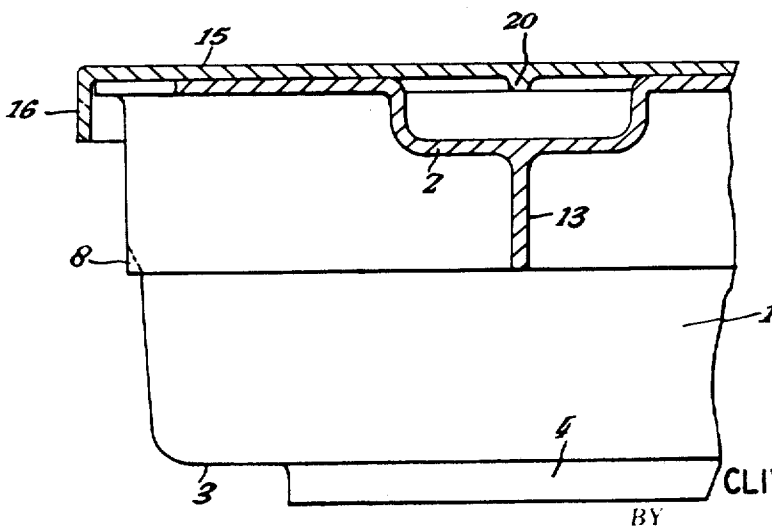


Fig. 5.



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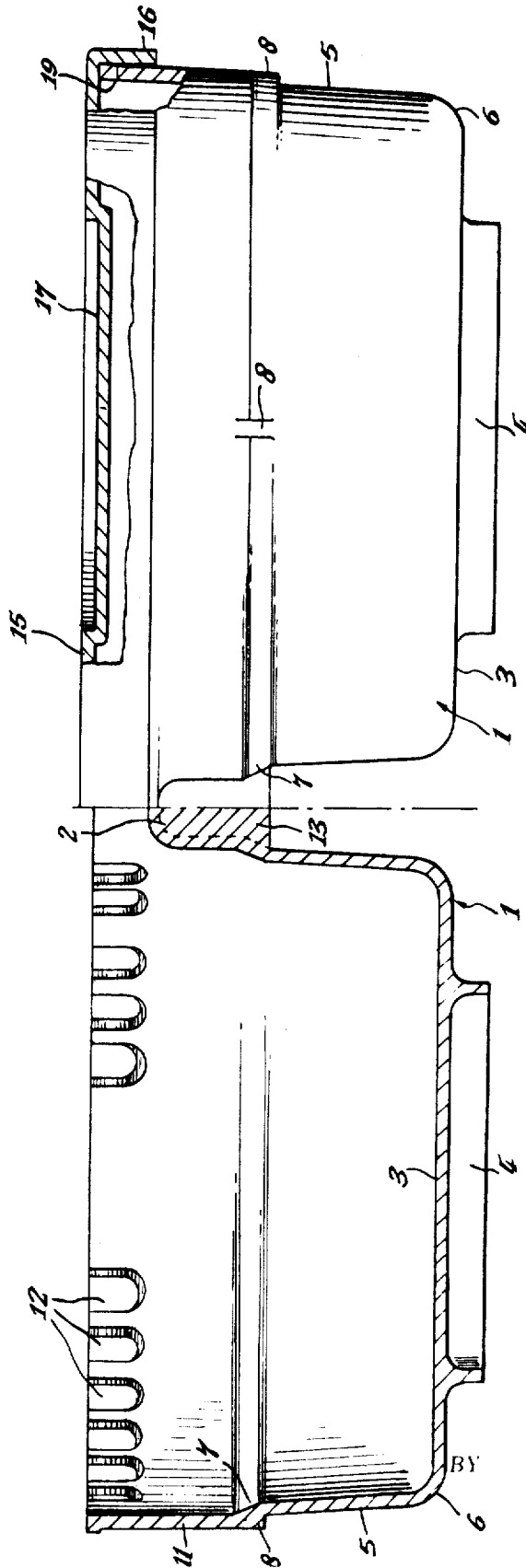


Fig. 2.

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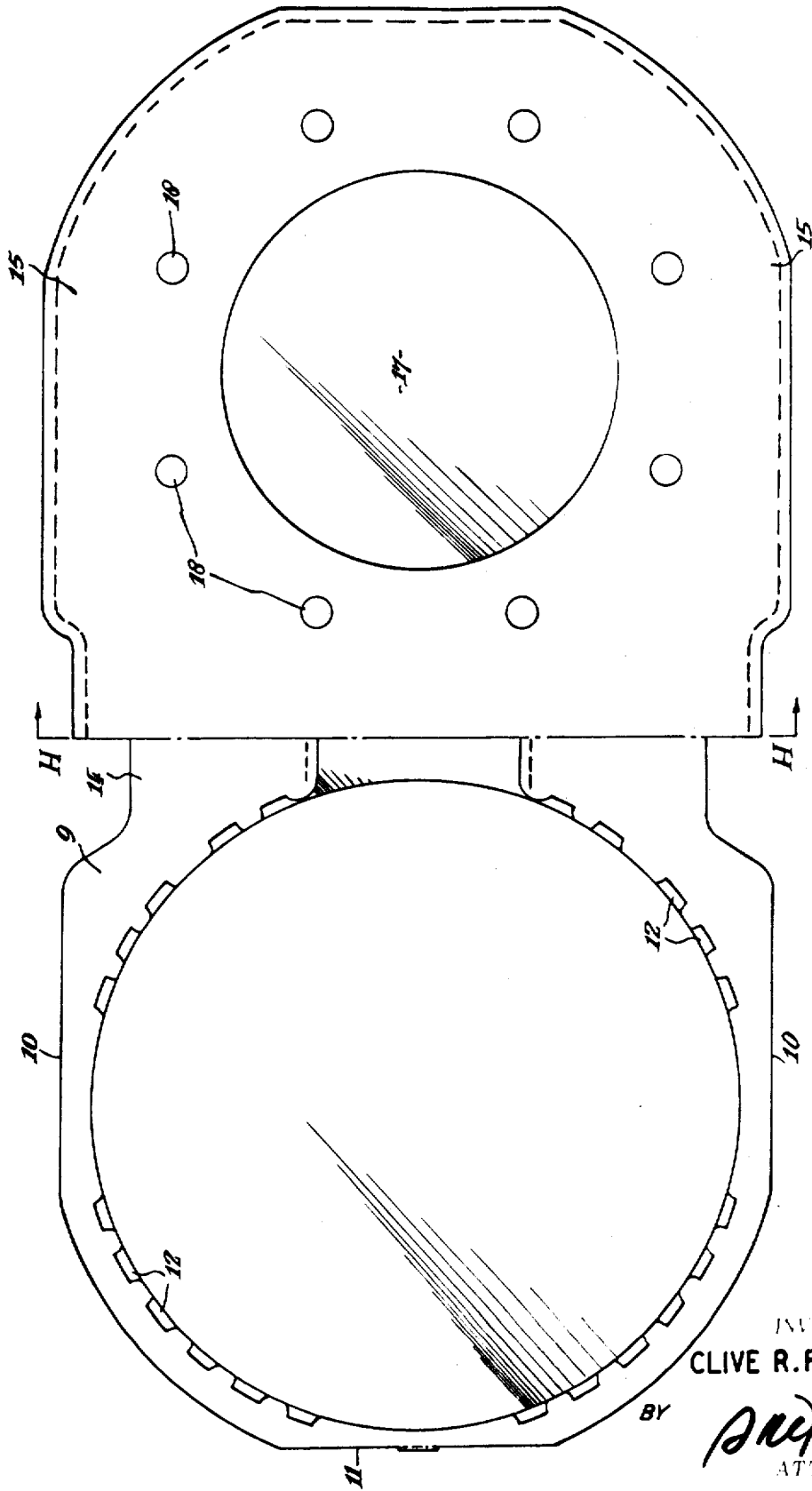


Fig. 3.

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LIVESTOCK CONTAINER

This invention relates to containers for transporting livestock, especially small livestock such as day-old chicks.

The container of the invention comprises at least two livestock containing chambers connected together in side-by-side relation each chamber being cup-shaped and of substantially circular cross-section and having a lid-retaining flange round its open end and a number of ventilation apertures arranged round the upper portion of its wall below the said flange, and a lid for each chamber, said lid having a dependent flange for engagement with the lid-retaining flange of the chamber, the flange on the lid being of sufficient depth to cover the wall of the chamber to a level below the level of the bottom of the ventilation apertures and being so formed that when the chamber is covered with the lid a space through which air can flow into the chamber via the apertures is left between the wall of the chamber and the flange on the lid.

Because included right angled corners of the container make it more difficult to clean, it is preferable to radius as many of these as is practically possible and at least those occurring inside the chambers at the junctions of the wall of each chamber with its base.

There may be provided a separate lid for each chamber of the container or a single lid may be provided for all the chambers. When the container consists of only two chambers a single lid may be hinged in the middle to allow separate access to each chamber.

The chambers are preferably connected together by a common section of the lid-retaining flange of the chambers and to improve the rigidity of the system there is preferably provided a stiffening rib between two chambers that are connected together.

Advantageously the chambers are connected together so that a common air space exists in the container. Preferably therefore a part of the top of the wall of each chamber in the region in which the chambers are connected together is cut away.

Preferably the containers are stackable and to this end there is advantageously provided a plinth on the base of each chamber which will fit into a recess in each lid. For added ventilation there may be provided additional ventilation apertures in the chamber lids and advantageously the plinth and recess are so designed that when two containers are stacked the base of the top container is spaced from the lid of the bottom container to allow air flow through the apertures in the lid.

It is also desirable that the containers be stackable at right angles to one another so that rows of containers may be interlocked for stability. Preferably therefore the design and dimensions of the container are such that the distance between the centers of two adjacent chambers of the container is the same as the distance between the centers of two adjacent chambers of two containers arranged side-by-side.

The ventilation apertures in the walls of the chambers are preferably formed immediately below the lid-retaining flange and are preferably arranged in several groups with blank portions of wall between. Over the blank portions the lid-retaining flange is preferably narrower than over the apertured portions and the lid may be formed with clips for engagement with the flange in one or more of these narrower portions.

For stability and ease of stacking the lid-retaining flanges and, of course, the lids, advantageously have straight portions preferably on the sides and/or ends of the containers so that the containers are in effect rectangular boxes even though they contain circular chambers. Preferably the straight portions of the flange are also the narrower portions thereof.

To ensure that adequate ventilation is maintained when a large number of containers are stacked side by side and one on top of the other, the container and lid are preferably designed to have a necked portion between the chambers which, by allowing vertical air columns to remain when the containers are stacked, enhance the ventilation afforded by the spacing of the lid flanges from the walls of the chambers of individual containers.

Preferably, the containers are so formed that when the lids are removed they can be nested one inside the other. For this purpose there is preferably provided means for preventing one container from becoming jammed inside another. Preferably also, the containers are so formed that when the lids are removed they can be nested at right-angles to one another so that rows of the nested empty containers can be interlocked for stability.

Although it is basically possible for a container to consist of any number of chambers the container preferably consists of two chambers only as then the containers are easier to handle because they are not too heavy and are reasonably rigid and with only two compartments the number of animals that is being dealt with at any one time is within reasonable limits.

The container of the invention may be made of any mouldable material that will give adequate strength combined with lightness and ease of mouldability. Preferably also the material should be a good insulator especially when the container is to be used for day-old chicks. Suitable materials are plastics materials, for example polyethylene and polypropylene especially in foamed form or foamed polyurethane. Structural foams, particularly of high-density polyethylene as described for example in U.S. Pat. No. 3,268,636 are especially suitable.

The container may be made by any desired forming process but is preferably made by injection moulding.

The invention will now be described in greater detail by way of example, with reference to the drawings in which:

FIG. 1 is a perspective view of one form of container in accordance with the invention;

FIG. 2 is a side elevation partially in section of the container shown in FIG. 1;

FIG. 3 is a plan view of the container shown in FIG. 1;

FIG. 4 is a detail drawing showing the nesting of two containers;

FIG. 5 is a partial section of line H—H of FIG. 3.

Referring to the drawings the container comprises two chambers 1 of circular cross-section, which are connected together with a bridging piece 2. The two chambers 1 each comprise a base 3 having an annular plinth 4 and a side wall 5. The junction 6 of the base 3 and wall 5 is rounded. The wall 5 about half way up has a step 7 and the upper part of each chamber 1 is of greater diameter than the lower part. At the step 7 on the outside of each chamber 1 are provided, at three points separated by 90°, short ribs 8 which act as stops when two containers, less lids, are nested one within the other.

Around the open ends of the two chambers 1 is a continuous, lid-retaining flange 9. The flange 9 is not of equal width at all points and is so formed that straight portions 10 extend along the sides of the container and straight portions 11 exist at the ends of the container.

The wall 5 of the chamber has a plurality of ventilation apertures 12 which are arranged in four groups spaced round the rim of the chamber immediately below the flange 9. The groups of apertures 12 are so arranged that they are diametrically opposed in the wall of the chamber and that no apertures 12 exist in the regions where the flange 9 is narrowest.

In the bridging piece 2, the edge of the two chambers 1 is formed into a common lip which is below the level of the tops of the walls of the chambers 1. A strengthening piece 13 is formed below the bridging piece 2 and extends down to the level of the step 7.

In the region of the bridging piece 2 the flange 9 is reduced in width producing a portion 14 in which the distance across the flange 9 is less than the diameter of the chambers 1.

The lid 15 (only one half of which is shown) is substantially planar except for a flange 16 for engagement with the flange 9 and two recessed portions 17 which are coaxial with the chambers 1, when the lid is on the container, and are capable of receiving the plinths 4 on the base 3 of the container. The lid 15 has a ring of ventilation apertures 18 around each recessed portion 17 and the depth of the recessed portions 17 is such that when the plinths 4 of a second container are received therein there is an air space between the base 3 of the upper container and the lid 15 of the lower container.

The flange 16 is of sufficient depth to cover the walls 5 of the chambers to a level below the level of the bottom of the apertures 12.

The shape of the lid 15 corresponds closely to the shape of the flange 9 except in the portion 14. At the ends 11 of the container the lid is provided with clips 19 which engage under the flange 9 at these points.

The lid 15 as is shown in the drawings is in a rigid single piece and has a strengthening rib 20 in the region where it crosses the bridging piece 2 but this is not essential and either the lid could be made in two pieces if clips 19 are provided to engage with the flange 9 in the straight portions 10, or the lid could be provided with a hinge across the bridging portion 2.

One particular advantage of the container of this invention arises from the provision of chambers having substantially circular cross-sections. This provision reduces losses of livestock during transit which, in conventional containers can be caused by livestock becoming entrapped in a corner and suffocated and/or crushed by other livestock.

What is claimed is:

1. A container for transporting livestock which comprises: at least two livestock containing chambers connected together in side-by-side relation each chamber being cup-shaped and of substantially circular cross-section and having a lid-retaining flange round its open end, a plurality of first ventilation apertures arranged around the upper portion of its side walls and a base having a plinth projecting therefrom; and a lid for each chamber including a plurality of second apertures in its top portion and having a dependent flange for engagement with the lid-retaining flange of the chamber, said dependent flange having a sufficient depth to cover the wall of said chamber to a

level below the level of the bottom of said first ventilation apertures to provide a space between the walls of said chamber and said dependent flange through which air can flow into said chamber through said apertures, and said lid having a recessed portion capable of supporting the plinth of a second container stacked thereon without blocking the passage of air to said plurality of second ventilation apertures positioned in said lid around said recessed portion.

2. A container as claimed in claim 1, wherein the junction of the wall of each chamber with its base is radiused.

3. A container as claimed in claim 1, wherein the chambers are connected together by a common section of the lid-retaining flange.

4. A container as claimed in claim 1, wherein there is a stiffening rib between two interconnected chambers.

5. A container as claimed in claim 1, wherein the chambers are so interconnected that there is a common air space in the container.

6. A container as claimed in claim 5, wherein a part of the wall of each chamber in the region in which two chambers are connected together is cut away.

7. A container as claimed in claim 1, wherein a separate lid is provided for each chamber.

8. A container as claimed in claim 1, wherein the chambers are all closed by a single lid.

9. A container as claimed in claim 1, which consists of two chambers.

10. A container as claimed in claim 9, wherein a single lid is provided which covers both chambers and which is hinged in the middle to allow separate access to the two chambers.

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