

No. 675,143.

Patented May 28. 1901.

B. L. SWOPE, Dec'd.

J. S. SWOPE, Executrix.

SHIPPING CASE.

(Application filed Nov. 8, 1900.)

(No Model.)

Fig. 1.

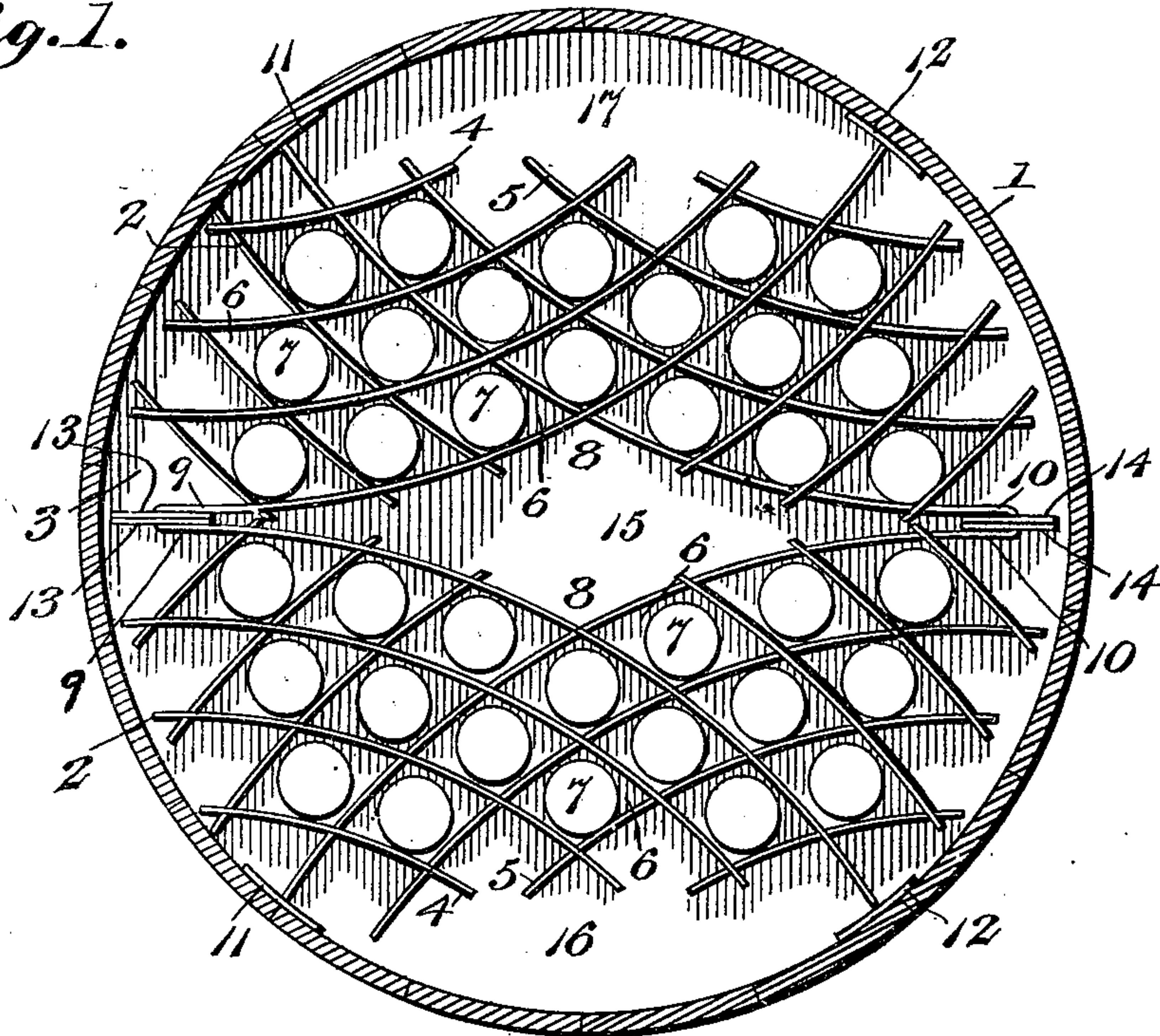


Fig. 2.

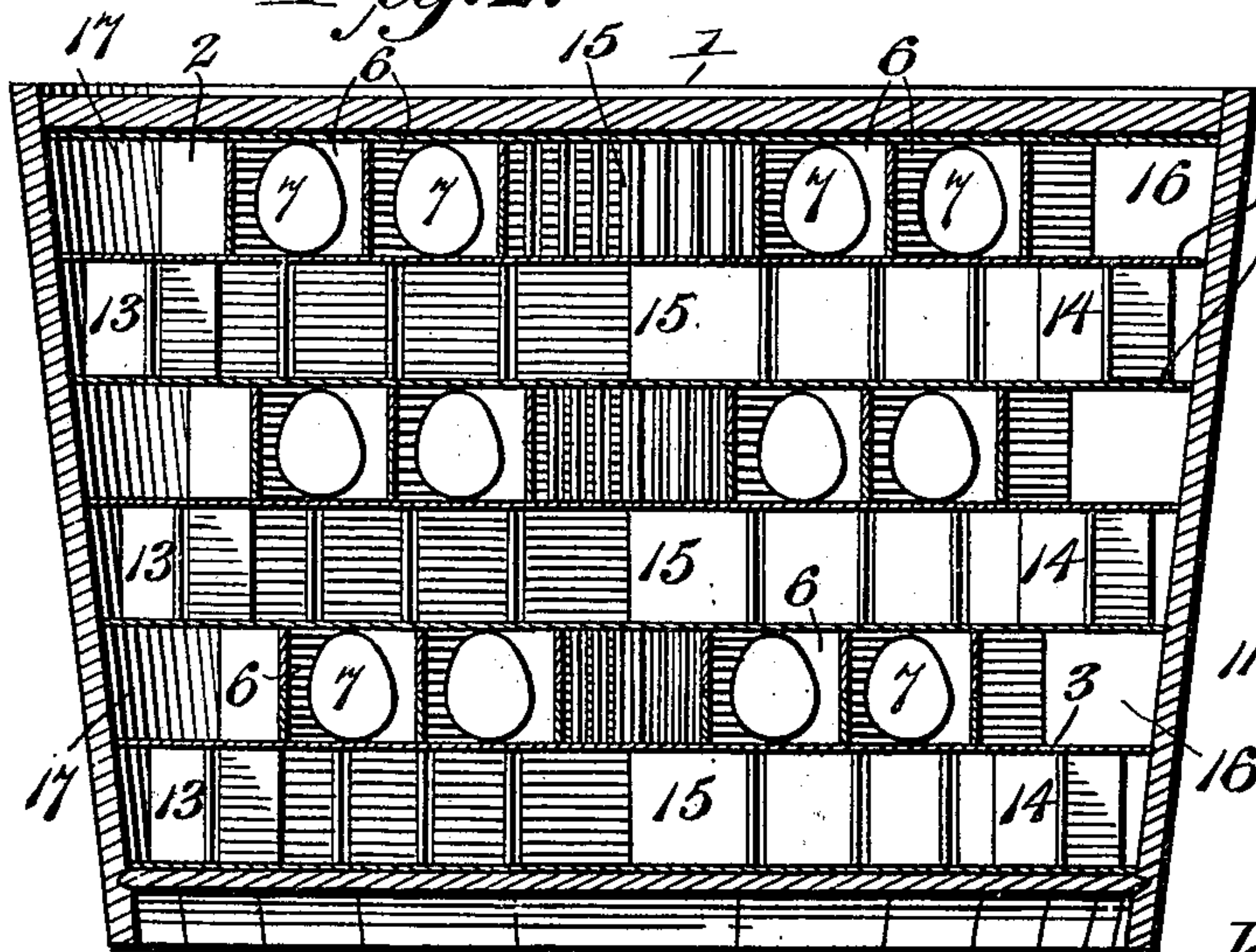
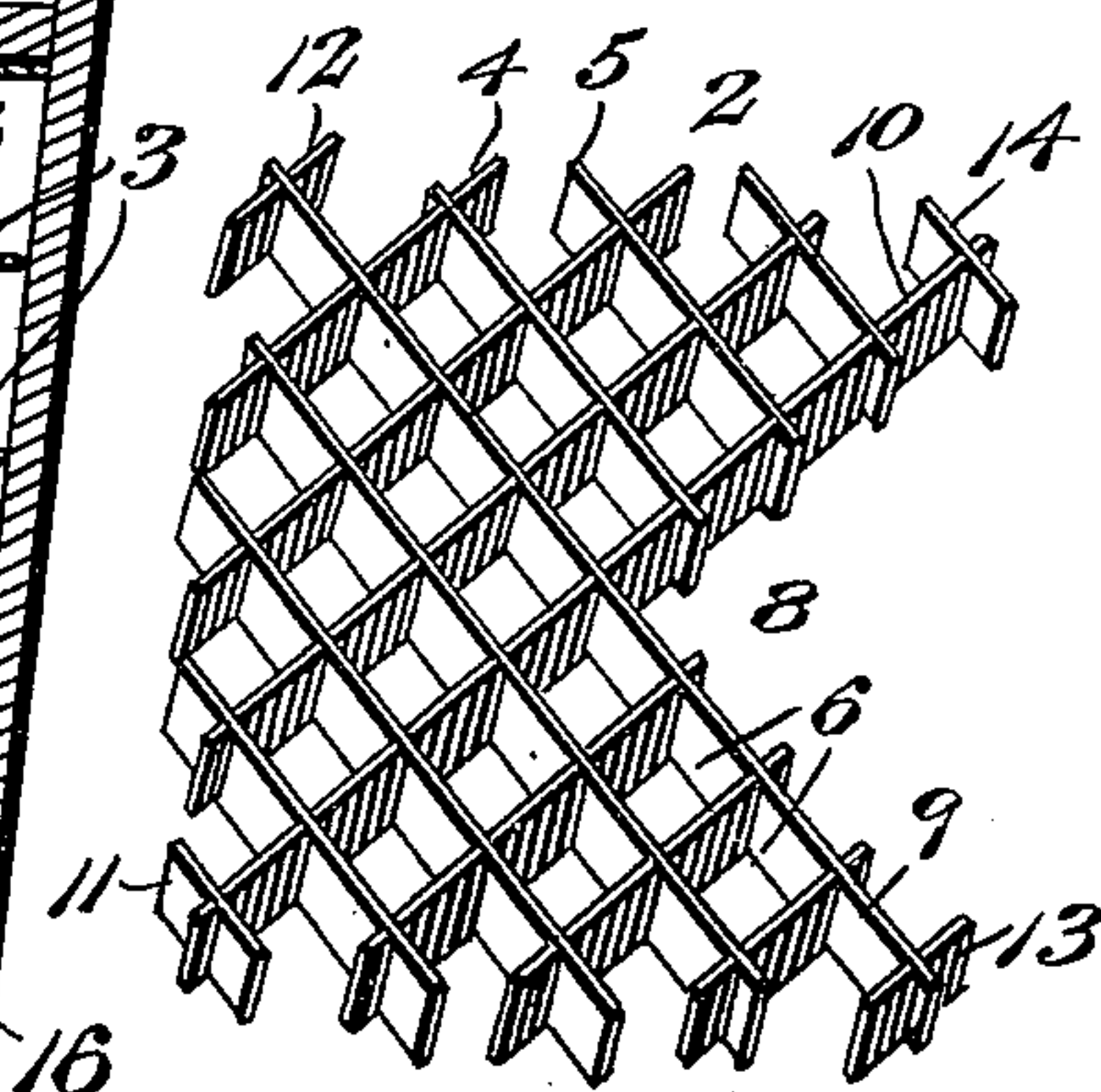


Fig. 3.



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UNITED STATES PATENT OFFICE.

JESSIE S. SWOPE, OF LOUISVILLE, KENTUCKY, EXECUTRIX OF BENJAMIN L. SWOPE, DECEASED.

SHIPPING-CASE.

SPECIFICATION forming part of Letters Patent No. 675,143, dated May 28, 1901.

Application filed November 6, 1900. Serial No. 35,733. (No model.)

To all whom it may concern:

Be it known that BENJAMIN L. SWOPE, late a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, invented a new and useful Shipping-Case, of which the following is a specification.

This invention relates to a novel shipping-crate designed with particular reference to the transportation of eggs. It is well understood by producers, shippers, and dealers that the transportation of eggs is ordinarily accompanied by considerable loss incident to breakage and to the spoiling of the eggs *en route*. It is equally well known that one of the most effective ways of preserving them is to change their positions at intervals.

With these facts in view the present invention is directed to the production of a shipping-crate which, while embodying an inexpensive construction, will prevent the eggs from being broken by rough handling of the case or crate and which will under the impulse of sudden jars or vibrations effect more or less movement of the eggs to aid in their preservation.

To this end the invention consists in providing a case with a plurality of egg-holders or cell members which are resiliently mounted within the case in a manner to permit them to yield under an abnormal jar thereof and to subsequently resume their normal positions.

The invention consists in certain other peculiarities of construction and arrangement, all as will hereinafter more fully appear.

In the accompanying drawings, in which are illustrated a preferred embodiment of the invention, Figure 1 is a horizontal sectional view through a case in the form of a half-barrel, showing one tier or layer of cell members in elevation and with its complement of eggs. Fig. 2 is a central vertical section of the subject-matter of Fig. 1, and Fig. 3 is a detail perspective view of one of the cell members or egg-holders.

Referring to the numerals of reference employed to designate corresponding parts throughout the views, 1 indicates a cylindrical shipping-case—as, for instance, a barrel, half-barrel, or other similar shipping-receptacle

of like or generally analogous construction. Within this case are arranged egg-holders or cell members 2 in tiers, preferably separated by removable horizontal partitions 3, of cardboard, paper, or other suitable material. Each of the tiers comprises a pair of cell members 2, which in the present embodiment of the invention are inherently resilient to an effective degree, inasmuch as they are constructed of cardboard or pasteboard strips 4 and 5, arranged in two series, disposed in right angular relation and connected one to the other to form a series of normally rectangular cells 6 for the reception of the eggs 7. Before being placed in the case each of the cells is of a generally rectangular form, but with the strips cut away at one side of the member to form a comparatively deep triangular recess 8, the sides of which are defined by those portions of the diagonal strips 9 and 10 which extend from the intersection of said strips to the inner corners of the member. By cutting the cell member in this particular form short sections of strips will be left upon the outer ends of each of the diagonal strips 9 and 10 to form what are termed “bearing-feet” 11 and 12 at the corners opposite the recessed side of the member and similar feet 13 and 14 at those corners of the member from which the recess 8 extends inwardly. There is now a cell member which is inherently resilient and is capable of being collapsed when subjected to pressure in one direction in the manner of an ordinary egg-holder, but which when subjected to pressure in the opposite direction will yield or bend, but with a reactive tendency which will manifest itself as soon as the pressure is removed. A pair of these members are placed within the case with their recessed sides 8 opposed to each other and with what is termed their “outer” bearing-feet 11 and 12 seated against the inner face of the wall of the case. Each member is now sprung back to bring the inner feet 9 and 10 of each member into opposition to the inner feet of the other member, the result being that the two members thus become, in effect, a single-cell structure having bearings against the inner wall of the case at four points—to wit, at the outer ends of each of the diagonal strips of each individual cell member. The effect of this will

be to form a springy structure capable of receiving a number of eggs and having a central chamber 15 defined by the opposed recesses 8 of the sections and a pair of outside chambers 16 and 17 defined between the rear edge of each cell member and the contiguous portion of the case-wall lying between the feet 11 and 12. It will now be seen that any sudden jar to which the case may be subjected will be taken up by the resiliency of the members, which will yield under the shock, but will quickly spring back to their normal positions. Thus the liability of breaking the eggs will be minimized, and, furthermore, they will be turned sufficiently to effect their preservation in a fresh condition by such jolts as the case will necessarily receive when being transported in accordance with the ordinary usages of commerce.

There is another very important result accruing from the use of cell members in the manner specified, and that is that members of a standard size may be employed, notwithstanding the varying contour of the receptacle or case, because the difference between the dimensions of the case at various points will be compensated for by the chambers 15, 16, and 17, which will be more or less contracted in order to cause the members to fit a greater or less diameter, as the case may be.

In practice the members of each tier are disposed in right-angular relation—that is to say, the chambers 15 of contiguous tiers will be disposed in the line of right-angular diameters of the case; but this is not absolutely essential and may or may not be resorted to, as desired. It will be observed that in the present embodiment of the invention the inherent resiliency of the cell members or egg-holders is utilized to secure such yielding of the egg cells or containers as will prevent the destruction of the eggs when the case is subjected to rough usage. It is evident, however, that instead of employing cell members of this specific nature they may be rendered sufficiently yielding by effecting their connection to each other and to the case through the medium of springs or other reactive devices. The present embodiment of the invention is far preferable, however, for the reason that the various desirable objects of the invention are obtainable by a simple and inexpensive adaptation of egg-holders of ordinary and inexpensive construction.

From the foregoing it will be observed that there is produced a simple, inexpensive, and efficient shipping-crate for eggs or other fragile freight; but while the present embodiment of the invention is probably best adapted for its exploitation it is wished to reserve the right to effect such changes, modifications, and variations as may fall properly within the scope of the protection prayed.

What is claimed is—

1. A shipping-case provided with a cell member having diagonally-disposed resilient

strips extended beyond the body of the member and constituting bearing devices therefor.

2. A shipping-case provided with a pair of spaced cell members each having a pair of diagonally-disposed resilient strips opposed at their outer ends to the wall of the case and at their inner ends to the strips of the other cell member.

3. A shipping-case provided with spaced cell members made up of two series of resilient strips in angular relation and fitted together to collapse in one direction, one strip of each series of strips being extended beyond the body of the member to constitute bearings therefor, the strips of each member being opposed at their inner ends to the strips of the other member and at their outer ends to the wall of the case.

4. The combination with a cylindrical shipping-case, of a pair of collapsible and resilient cell members in spaced relation to each other and to the wall of the case and each member having a bearing against the other member and against the wall of the case.

5. A cell member for shipping-cases comprising a cellular body having a number of cells defined by series of connected and angularly-related strips certain of which are extended beyond the body and provided with bearing-feet.

6. A cell member for shipping-cases comprising a substantially oblong cellular body formed with a number of cells defined by resilient interlocked diagonal strips extended beyond the body at the corners thereof.

7. A cell member for shipping-cases comprising a substantially oblong cellular body having resilient diagonal strips extended between the ends thereof, said body being formed with a reentrant recess defined by said strips.

8. A cell member for shipping-cases comprising a cellular body made up of collapsibly-connected resilient strips and having diagonal strips extended beyond the body and provided with bearing-feet, said cell member being cut away at one side to define a V-shaped recess bounded by the diagonal strips at one side of their point of intersection.

9. The combination with a shipping-case, of a plurality of cell members in spaced relation to each other and to the case, resilient bearing members intermediate of the cell members, and other bearing members bearing against the case.

10. The combination with a shipping-case, of a plurality of cell members located within the case and in spaced relation to the case and to each other, and resilient strips constituting elements of the cell members and bearing at their opposite ends against the wall of the case and against the contiguous end of a strip extending from the other cell member.

11. The combination with a shipping-case, of a plurality of cell members therein, said

members being in spaced relation to each other and to the case and made up of diagonally-related resilient strips, certain of the strips of each member having terminal bearings against the outer wall of the case and against a strip of the opposed cell member.

12. A cell member for shipping-cases, comprising a cellular body made up of collapsibly-connected resilient strips having diagonal strips defining, beyond one side of their intersection, a reëntrant recess extending into the member.

13. A cell member for shipping-cases comprising a cellular body made up of connected

resilient strips and having diagonal strips defining beyond one side of their intersection a reëntrant recess extending into the member.

In testimony that I claim the foregoing as the invention of BENJAMIN L. SWOPE I have hereto affixed my signature in the presence of two witnesses.

JESSIE S. SWOPE,
Executrix of the late Benjamin L. Swope, deceased.

Witnesses:

LIDA SWOPE,
RANDOLPH H. BLAIN.