

J. A. HILLIKER.  
EGG CRATE.  
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915,177.

Patented Mar. 16, 1909.

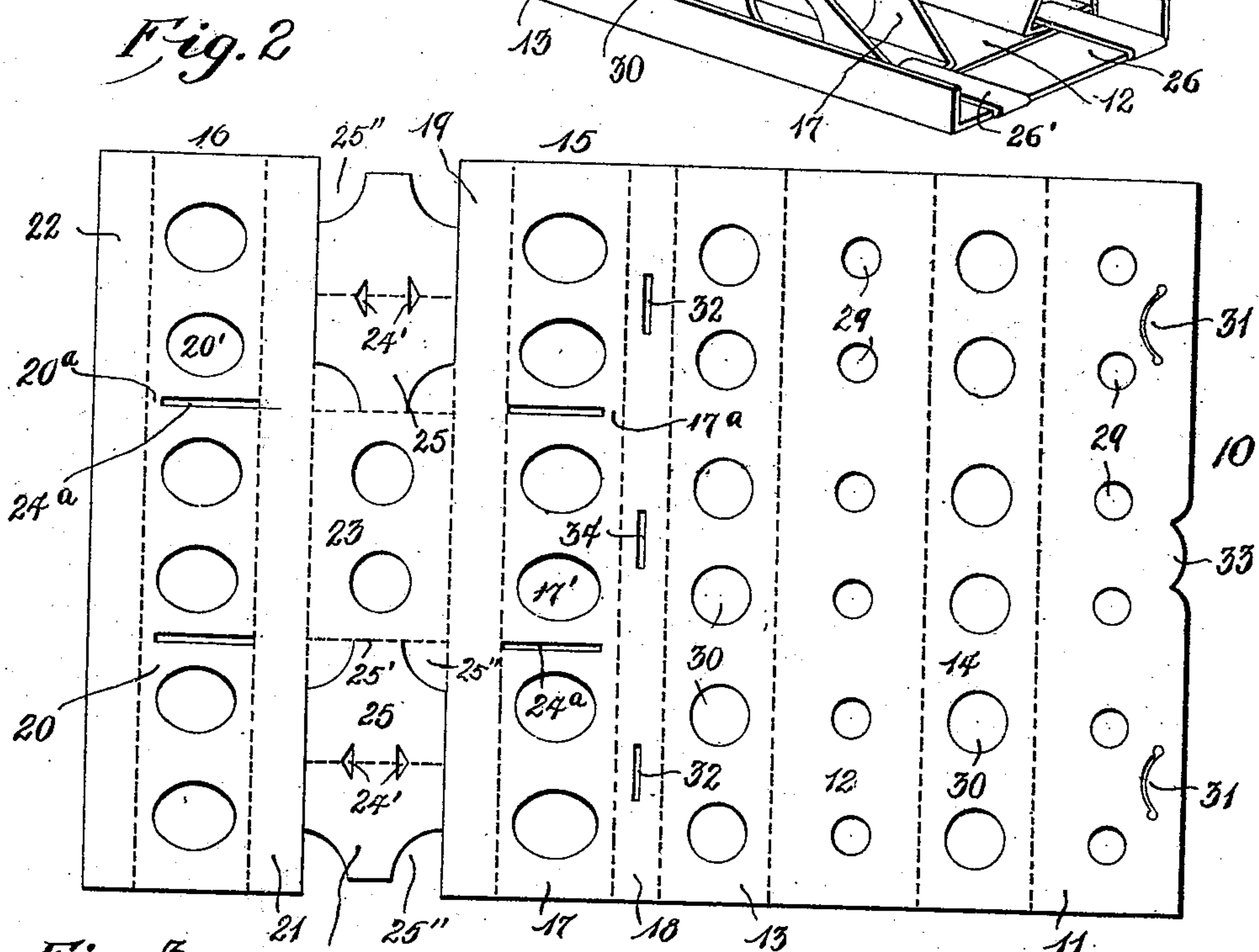
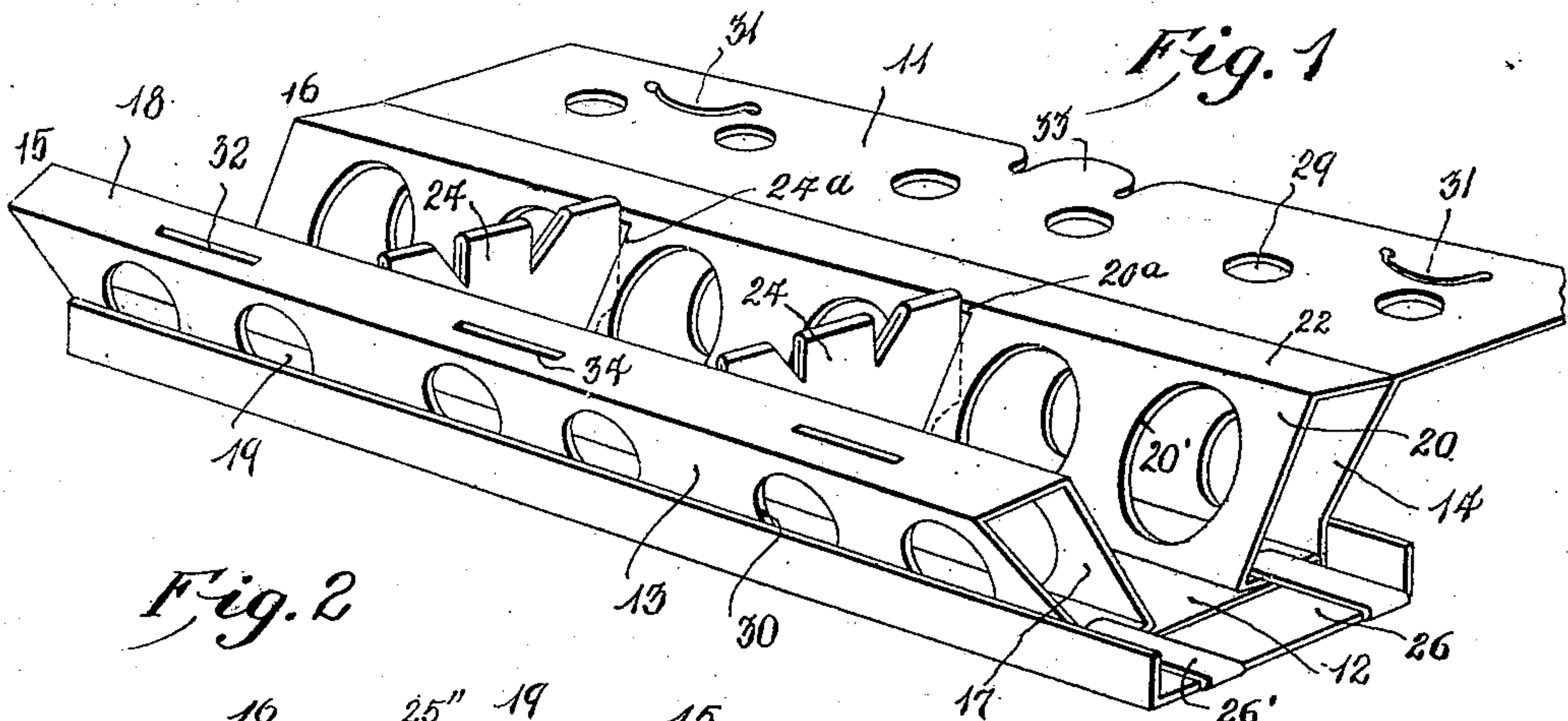
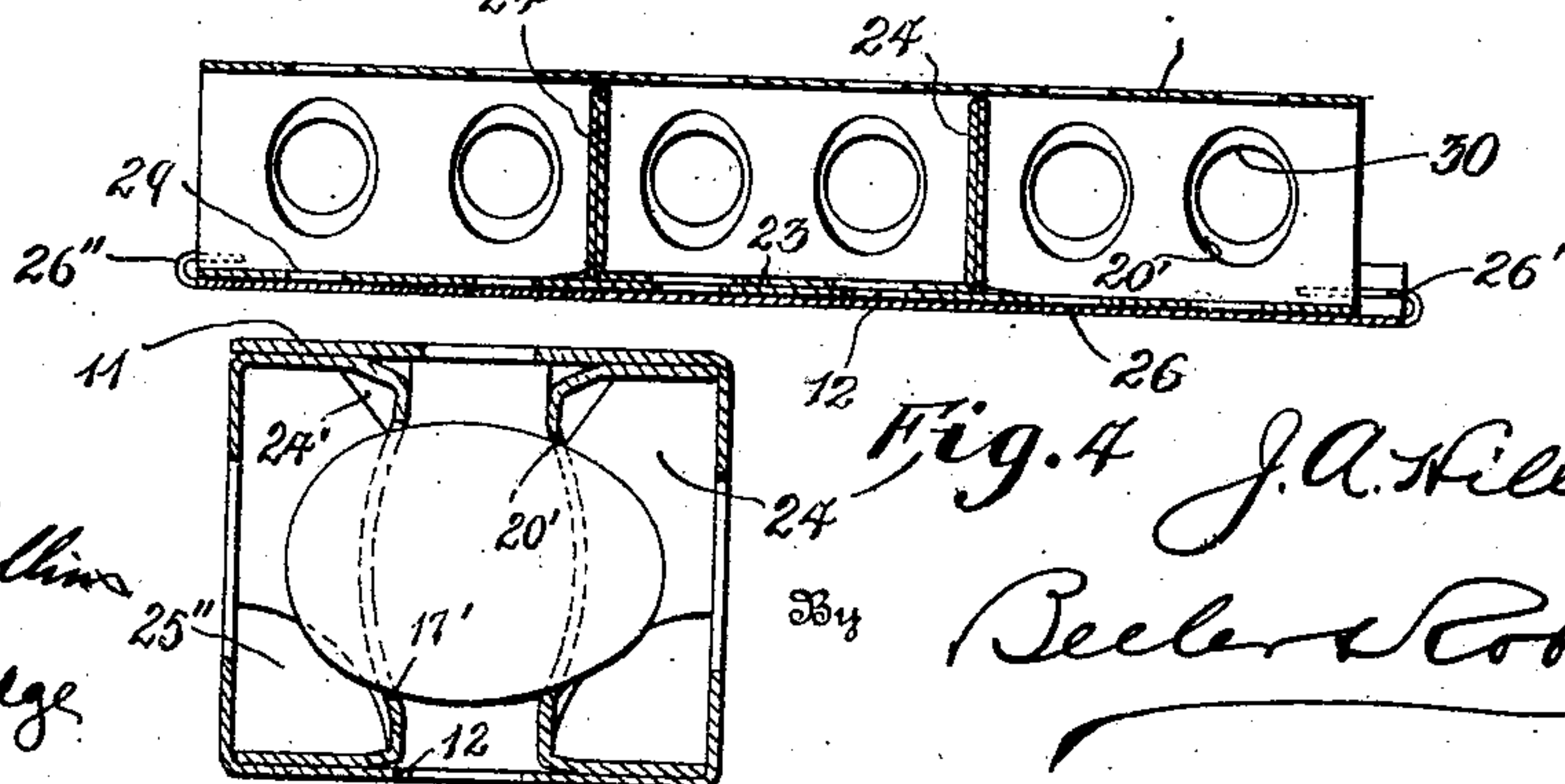


Fig. 3



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# UNITED STATES PATENT OFFICE.

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EGG-CRATE.

No. 915,177.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed November 23, 1908. Serial No. 463,988.

*To all whom it may concern:*

Be it known that I, JOHN A. HILLIKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Egg-Crates, of which the following is a specification.

This invention relates to the class of egg crates, and consists of certain specific novel features of construction constituting improvements in the egg crate shown and described in my co-pending application, Serial No. 443,530, filed July 14, 1908. In this present invention, as in the earlier application, means are provided whereby a number of eggs may be inclosed in a crate or case in such a manner that they may be freely handled for all legitimate purposes, such as shipping, marketing, and candling, and yet to maintain the packages or cases in proper form. It is desirable in the handling of eggs so as to market them to the best advantage to the producer for the packages to be sealed when filled, the seal bearing the name of the packer and if desired the date of packing, and for such seal to remain unbroken throughout the handling of the package until the eggs are to be consumed. If desired the individual eggs may be stamped after being inclosed in the crate or case. In constructing egg crates of the character set forth herein it is desirable to utilize stock which shall be both cheap and strong. For this purpose a suitable character of straw-board may be employed, and the devices are preferably stamped from sheets of such board and thereafter marked or creased so that after being received by the person filling the same with eggs they will be readily folded from the flat blank form into the proper form to receive the eggs. An additional desideratum is to combine the maximum strength with the greatest economy in amount of straw-board or other material used in the manufacture of the device.

All of the foregoing objects and others which will appear as this description progresses are fully set forth hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view illustrating a preferred embodiment of this invention substantially in the position which it occupies when about to be filled with eggs, though spaced somewhat wider than usual; Fig. 2 is a plan view of the blank after being

stamped or cut; Fig. 3 is a longitudinal sectional view of a folded case turned on one side, and Fig. 4 is a transverse section showing the preferred form of internal bracing means.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

The numeral 10 indicates generally a substantially rectangular blank comprising crate or casing. Such blank is formed marked or creased in such a manner as form side walls 11 and 12, a top 13, and bottom 14, these four members constituting inclosing bracing walls. As a continuation of such members and formed from the same structure there are a plurality of filling members 15 and 16. The member 15 is composed of an egg receiving wall 17, and auxiliary bracing members 18 and 19. Likewise the box-like member 16 comprises an egg receiving wall 20 and auxiliary bracing members 21 and 22. The connecting web 23 between said box-like members 15 and 16 is cut away in the formation of the article, and internal bracing members 24 are formed therefrom, thereby economizing in the amount of material used. Each brace 24 comprehends a member 25 connected at 25' to the main portion of the web 23 and adapted to be bent along such line of connection so as to permit the member 25 to assume a right angle with respect to the said web 23. The brace when thus disposed has contact with all the four walls of the closed casing, serving to prevent both lateral and vertical strains from crushing the casing and contents. The member 25 is cut away at 25'' in order to facilitate the operation of folding.

In order to multiply the effective strength of the brace, I prefer to retain sufficient stock of the blank to form a companion brace member 25<sup>a</sup>, coextensive with the member when folded into operative position.

The egg receiving walls 17 and 20 provided with openings 17' and 20' respectively of elliptical form so as to conform to the shape of the eggs retained therein, and the opening larger than the others for the reception of those first mentioned are intended to receive the larger ends of the eggs, and whereby the eggs will project through the respective openings to about the same extent. In reference to the openings 17' and 20' it may be



stated that were these openings circular, the curvature of the walls 17 and 20, when the eggs are engaged thereby, would give rise to undue pressure on the ends of the eggs tending to crush the same from opposite sides. The elliptical form of the openings 17' and 20' is therefore of importance because the curving of the walls 17 and 20 when engaging the eggs converts said openings into seats 10 the edges of which bear against the eggs with equal pressure at all points. Furthermore the walls 17 and 20 are to be provided with transverse slits 24<sup>a</sup>, which may be sufficiently shorter than the full width of said walls to 15 leave catches 17<sup>a</sup> and 20<sup>a</sup> adapted to interlock with notches 24' formed in the brace members. By providing the cutaways 25'' the box members 15 and 16 may be folded in place, the brace members 24 being received into the slits 24<sup>a</sup> aforesaid.

In order to facilitate the introduction or removal of eggs, the folded casing may be supported in a shallow flat bottomed tray 20 of any suitable construction, the same being provided with tongues to engage the casing to hold it therein. The tongues 26' are preferably longer than the tongues 26'' are required to be. After folding the casing as above set forth, the same is slipped into the tray, one end passing beneath the tongues 26' so as to permit the opposite end to enter the tongues 26''. When held in this position, the resiliency of the structure of the casing will permit the eggs to be introduced into their respective pockets, and thereafter the casing will be closed and locked.

The side walls 11 and 12 are preferably provided with peep holes 29 for the purpose 40 of ventilation and detection of broken or soiled eggs. The top and bottom of the device also are provided with peep holes 30, preferably of larger size than those of the sides, whereby the packer may stamp the 45 eggs therethrough after the casing is closed. Any or all of said peep holes may be employed for candling purposes while the device is being handled. The web 23 is likewise perforated in order that the view through all of the peep holes may be unobstructed when the device is folded. The side wall 11, constituting one end of the rectangular blank 10, is provided with tongues which project toward the main body of the casing, and which are intended to interlock with notches 32 formed in the brace member 15. Such tongues are directed in such a manner as to prevent the tendency of the crate to open after being filled. Said side wall is furthermore provided with a tongue 33 adapted to interlock with a slit 34 on the same brace member, but said last mentioned tongue is directed so as to prevent the tendency for the crate to crush by downward pressure.

It is to be noted, furthermore, that the braces 24 are preferably duplicated, as shown, and that they engage and support those portions of the inclosing walls which are intermediate of the aforesaid interlocking tongues 31 and 33. 70

A feature of importance in this invention resides in the peculiar formation of the blank, whereby in the operation of folding the case preparatory to use, the filler may be made by a folding movement in the same direction 75 as that incidental to folding the body of the article. This advantageous result is of course primarily due to the fact that the filler is folded on lines parallel with the fold lines of the sides of the case. 80

Having thus described the invention, what is claimed as new is:

1. An egg case comprising an inclosing body having a filler composed of spaced egg receiving walls, said walls having elliptical 85 openings therein forming egg seats and being flexible so as to curve outwardly when engaging the eggs and thus form cushioning supports, the curvature of the said walls causing the edges of the elliptical seats to 90 bear against the eggs with equal pressure at all points.

2. An egg case comprising a substantially rectangular blank folded laterally upon itself to form substantially continuous top, 95 bottom, and side bracing walls of an egg compartment, and portions of said blank being folded to form spaced box-like filler members within said compartment, said filler members being provided with openings 100 forming egg seats and also transverse slits, and bracing means extending through said slits and serving to prevent both lateral and vertical crushing strains, substantially as set forth. 105

3. An egg case composed of a substantially rectangular blank folded laterally upon itself to form practically continuous inclosing bracing walls, and a part of said blank inclosed within said walls being folded to form 110 a filler having spaced egg receiving walls, there being an integral portion of the blank between said last mentioned walls cut to form auxiliary bracing means for the inclosing walls. 115

4. An egg case comprising a blank folded upon itself to form top, bottom, and side inclosing walls and oppositely disposed inclosed filler members therein, each of said members comprising an egg receiving wall 120 and bracing members serving to maintain the egg receiving wall in spaced relation to the adjacent top or bottom wall, one end portion of the blank constituting one of said inclosing walls and having interlocking devices 125 and the other end portion of the blank constituting one of said bracing members, said interlocking means cooperating with another of said bracing members, and a brace member integral with the blank and extending 130



through the egg receiving walls and having contact with all of said inclosing walls to brace the same internally in all directions.

5 5. The hereindescribed blank for an egg crate consisting of one end portion constituting one side wall and having a plurality of tongues and a row of peep-holes, a bottom member having peep-holes, a second side wall member having a row of holes to register with  
10 those of the first side member, a top member having holes to register with those of the bottom, an inner bracing member having slots to receive the said tongues, egg receiving members having openings for eggs, and connecting means between said egg receiving  
15 members including additional interior bracing means.

20 6. An egg case composed of a blank folded laterally upon itself to form practically continuous inclosing walls, and a part of the blank inclosed within said walls being folded to form a filler having spaced egg receiving walls, and transverse bracing means between

said filler walls serving to engage all of said inclosing walls to counteract all crushing 25 strains.

7. An egg case composed of a unitary blank constituting top, bottom, and side inclosing walls, internal transverse bracing means to cooperate with all of said walls, 30 and egg supporting members serving to retain said bracing means in position.

8. An egg case composed of a unitary blank constituting top, bottom, and side inclosing walls, internal transverse bracing 35 means to cooperate with all of said walls, and slitted egg supporting members to receive and interlock with said bracing means to hold the same in place and to hold the case folded.

In testimony whereof I affix my signature 40 in presence of two witnesses.

JOHN A. HILLIKER.

Witnesses:

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