

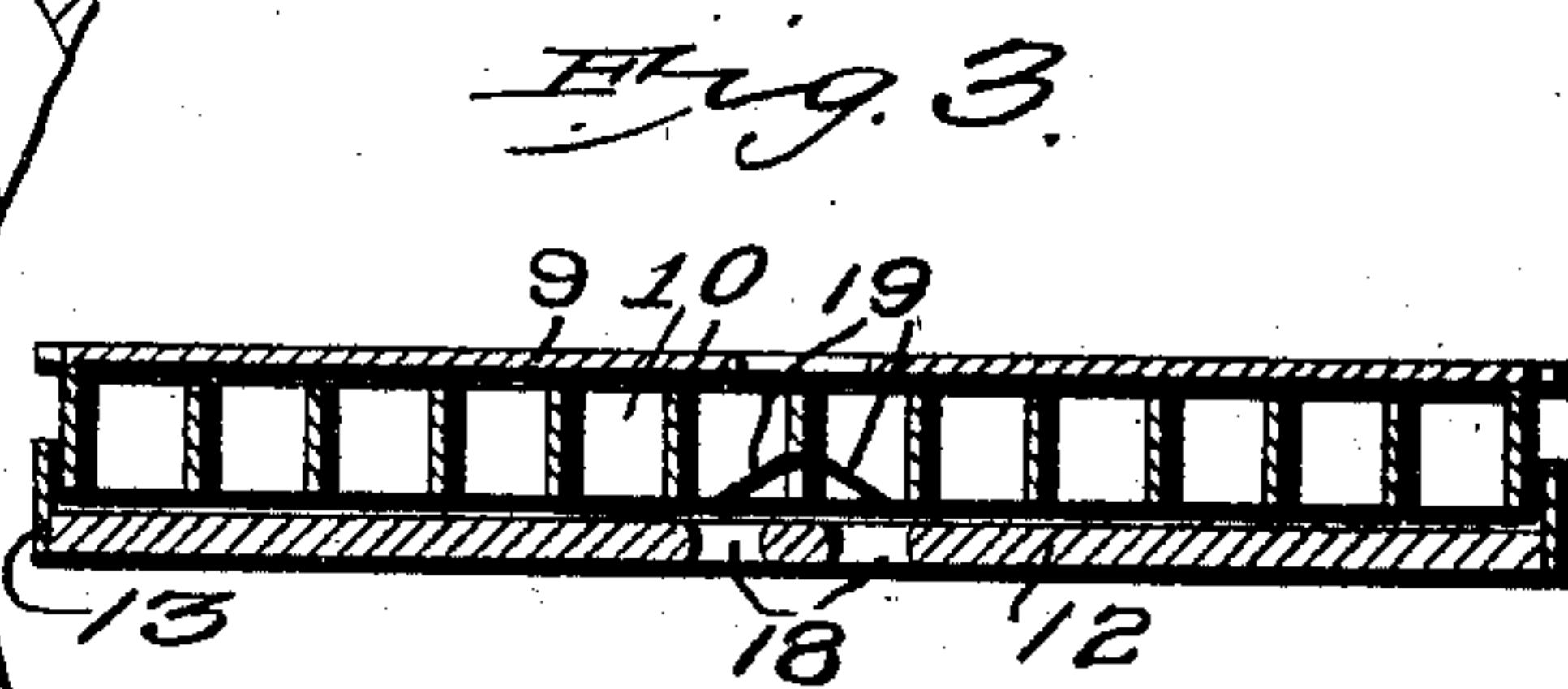
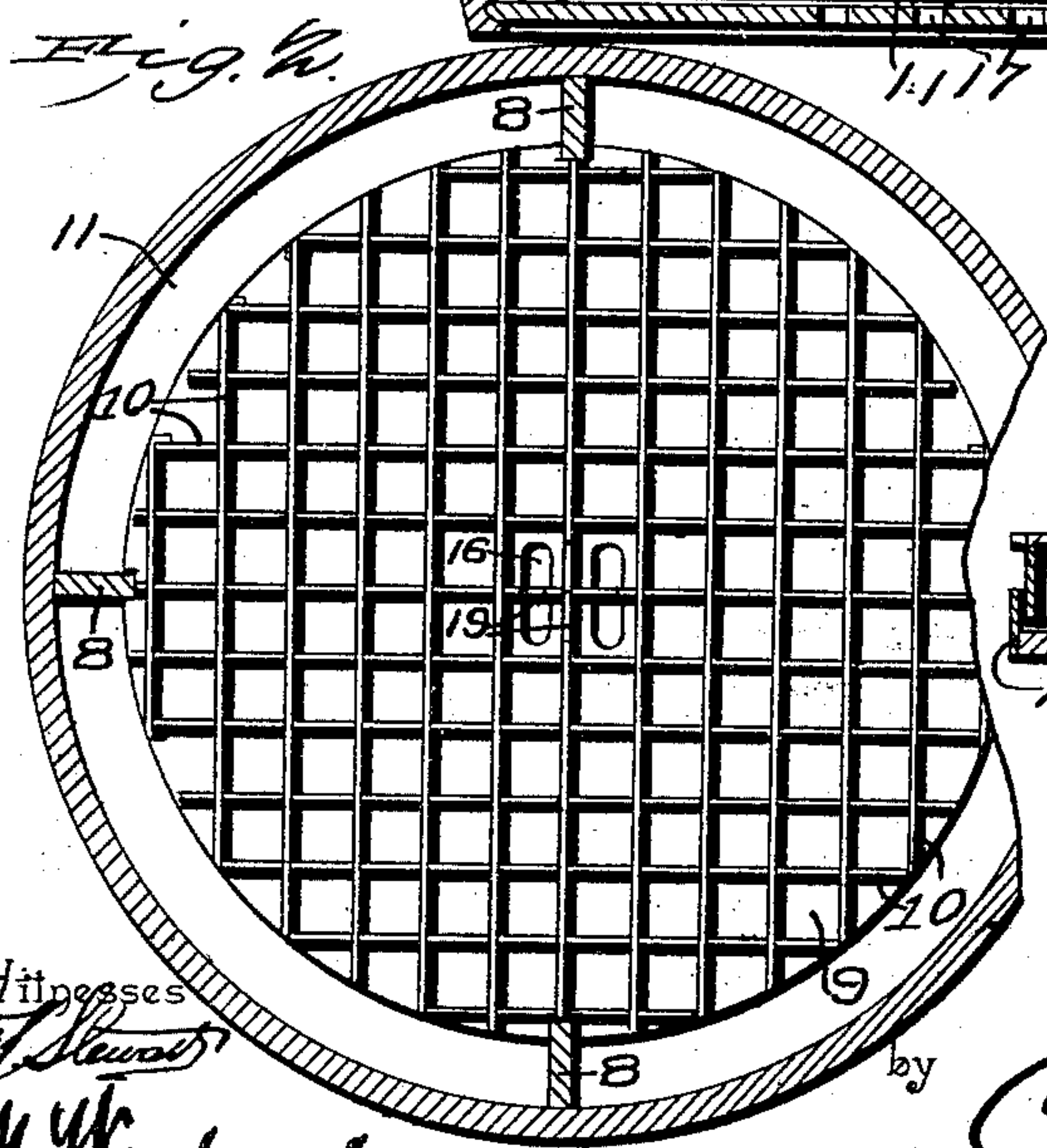
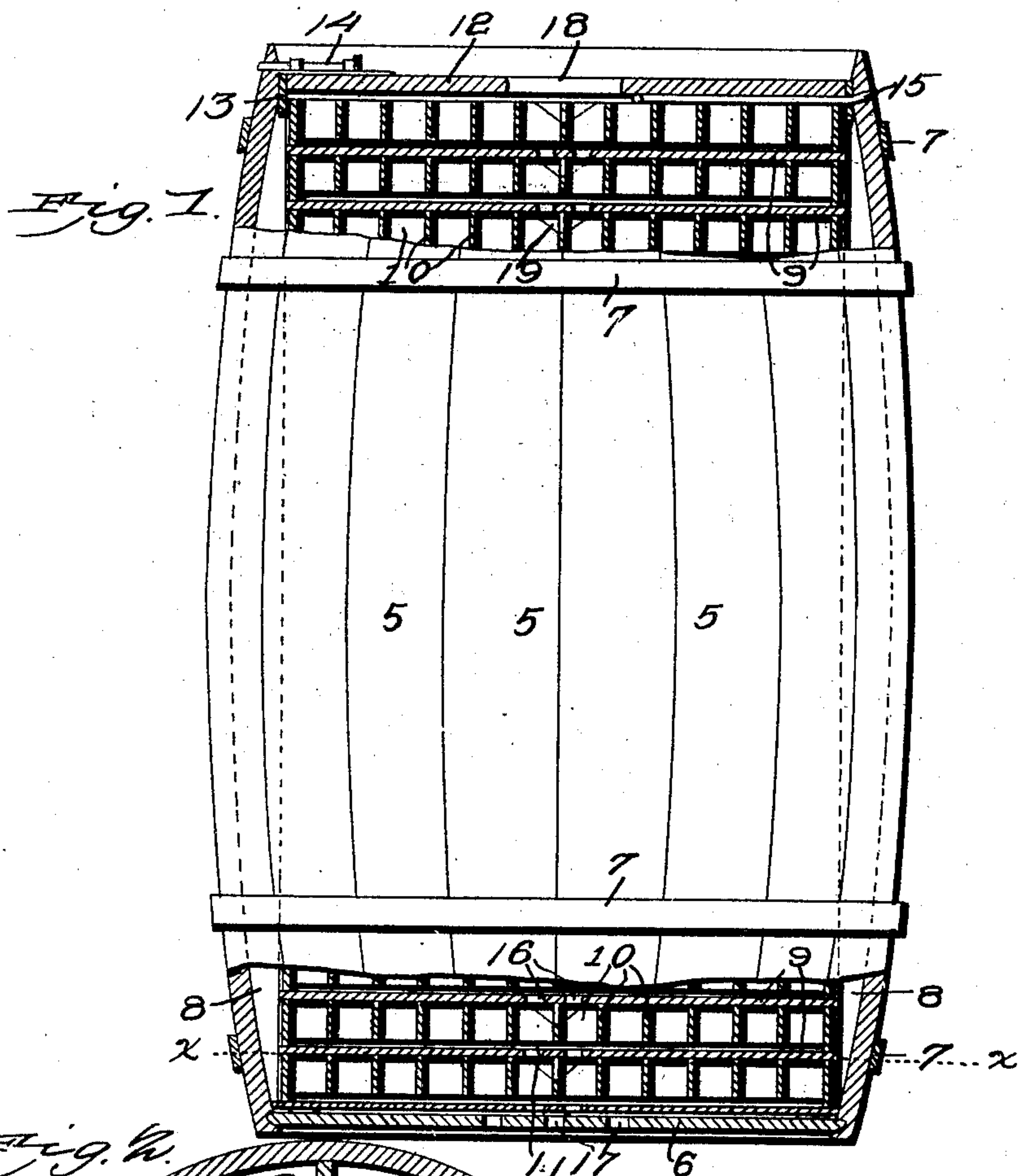
No. 707,665.

Patented Aug. 26, 1902.

E. E. WILLIAMS.
SHIPPING CRATE.

(Application filed Feb. 28, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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SHIPPING-CRATE.

SPECIFICATION forming part of Letters Patent No. 707,665, dated August 26, 1902.

Application filed February 28, 1902. Serial No. 96,144. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER E. WILLIAMS, a citizen of the United States, residing at Nevada, in the county of Vernon and State of Missouri, have invented a new and useful Shipping-Crate, of which the following is a specification.

This invention relates to closures employed in shipping goods, more particularly eggs, but which may be employed in shipping other products of a fragile nature, such as fruit, and has for its object the production of a crate or other closure in which the products may be retained in separate compartments and be protected from jar or concussion while in transit and at the same time be easily accessible for inspection or removal and also easily arranged for insertion into the inclosure or casing.

The device is illustrated in the drawings, in which—

Figure 1 is a side elevation partially in section. Fig. 2 is a transverse section on the line *xx* of Fig. 1. Fig. 3 is a sectional detail illustrating the double use to which the cover is applicable.

The outer casing may be of any suitable material, form, size, or construction, but will preferably be in the form of an ordinary barrel, as shown, with the sides or body of staves 5 and with a bottom 6 and hoops 7.

Attached at intervals to the interior of the casing are vertical ribs or guides 8 throughout the whole length of the casing. These ribs are designed to form guides or supports to a series of plates or disks 9, disposed at regular intervals throughout the interior of the casing and provided with recesses corresponding to and adapted to be engaged by the ribs 8, as shown, which thus maintain the plates in position and prevent any lateral or revolving or oscillatory movement. The plates 9 serve as supports for the division-strips 10, forming the retaining-compartments for the eggs or other articles, and may be of any suitable material and secured in any suitable manner. In devices of this character these division-strips are sometimes formed of paper or wood, sometimes of wire, either with or without canvas or burlap coverings,

and sometimes of metal, and I do not wish to be limited to any specific material or to any specific construction of this part of the apparatus, as the invention is capable of being employed in connection with any of the constructions or materials used for this purpose. As many of the plates 9, with their attached strips 10, may be employed as will when superimposed in the casing completely fill the casing. Each of the plates 9, with its attached division-strips 10, will form a separate independent tray.

In Fig. 1 of the drawings the upper and lower portions of the casing are shown broken away with a number of the trays shown in position; but it will of course be understood that the whole interior of the casing will be filled with the superimposed trays. Each of the plates 9 rests upon and is supported by the division-plates 10 of the plate next below them, as shown. The plates 9 are smaller in diameter than the interior of the casing, so that an air-space 11 is constantly maintained between the trays and the casing on all sides, this air-space serving two very important purposes—one, to maintain an air-space all around the trays and assist in preserving the contents from either heat or cold and also to lessen the effect of jolts or concussions to which the case may be subjected when in transit. The space 11 also provides spaces for the insertion of a non-conducting material or substance, if required.

The cover or top of the casing is made removable and will be provided with means for locking it in position. The cover is formed of a disk 12, having a rim or flange 13 fitting down into the upper end of the casing and held removably therein by any suitable detachable fastening, such as a bolt 14 and spurs 15. Each of the plates 9 is provided with one or more apertures 16 to provide for air circulation centrally through the trays, and the bottom 6 and top 12 are likewise provided with perforations, as indicated at 17 and 18 in Fig. 1, to coact with the apertures 16 to insure the free circulation of the air throughout the casing. The central portions of the central members of the transverse compartment-forming strips 10 are cut away, as

shown at 19, to provide open spaces adjacent to the apertures 16 to insure the free circulation of the air.

The cover or top 12, as before stated, is provided with a depending rim 13, this rim possessing two functions—one, to increase the efficiency of the cover and enable it to be supported more firmly in place in the casing and also to enable the cover to be employed as a receptacle for the contents of one of the trays when inverted, as shown in Fig. 3. The size of the rim 13 will correspond with the series of division-strips 10 of each tray, so that the rim 13 will fit down over them. By this means if it is desired to remove the contents of one of the trays the cover can be set down upon the tray, with the rim 13 projecting down around the outside of the set of division-strips 10, and then by holding the tray and cover firmly in contact and inverting them the contents of the tray will be safely transferred to the interior of the cover and supported thereon by the rim 13 when the tray is removed. This makes the cover a very convenient and useful adjunct to the device and greatly increases its efficiency.

In cold weather disks of a fabric of some kind will be placed upon the interior of the bottom 6 before the trays are inserted and over the uppermost tray after it is placed in position to close the apertures 17 and 18 and prevent the entrance of cold air.

As before stated, the cases may be of any size or capacity, as the improvement is equally applicable to any size of casing. This makes a very strong and durable shipping-closure, easily handled, and affording ample protection to the contents. The apertures 17 and 18 in the ends also serve as finger or hand holds to assist in handling the device and in that respect are a great convenience and greatly increase the efficiency of the device. In like manner the openings 16, formed near the center of the individual disks or plates 9, serve as handles by means of which the said individual plates, with the contents of the cellular casing supported thereon, may be readily removed from the barrel or outer casing by simply removing the contents of the four central cells, when the fingers may be readily inserted through the openings 16, thereby enabling the disks to be lifted out of

the casing. This feature will be found of considerable importance not only in removing the contents, but also in placing it in the casing, inasmuch as without some such means access to the interior of the outer casing would be quite difficult.

Having thus described my invention, I claim—

1. In a shipping-closure, the combination of a casing having sides that are bulged intermediate the ends of such closure, vertical interior guides extending through the entire length of said casing, and a plurality of superimposed disks having recesses engaging said guides whereby the said disks are movable through the entire length of the casing, substantially as set forth.

2. In a shipping-closure the combination of a casing having bulging sides, vertical interior guides extending through said casing, superimposed disks having recesses engaging said guides, and openings in said disks forming handles and admitting of the passage of ventilation therethrough, substantially as set forth.

3. In a shipping-closure a casing having apertures through the ends and provided with vertical interior guides in combination with a series of superimposed disks having recesses engaging said guides and provided with approximately centrally located ventilating-openings forming handles, and cellular casings interposed between said disks and separating the same, substantially as set forth.

4. In a shipping-closure, a casing, a series of superimposed trays supported within said casing and formed with transverse division-strips forming compartments thereon, a cover to said casing having a depending flange engaging said casing when in position thereon, and adapted to engage said compartments on said tray and afford means for receiving and supporting the contents of one of said trays when inverted, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EBENEZER E. WILLIAMS.

Witnesses:

A. J. POLAND,
M. C. CUMMINS.