

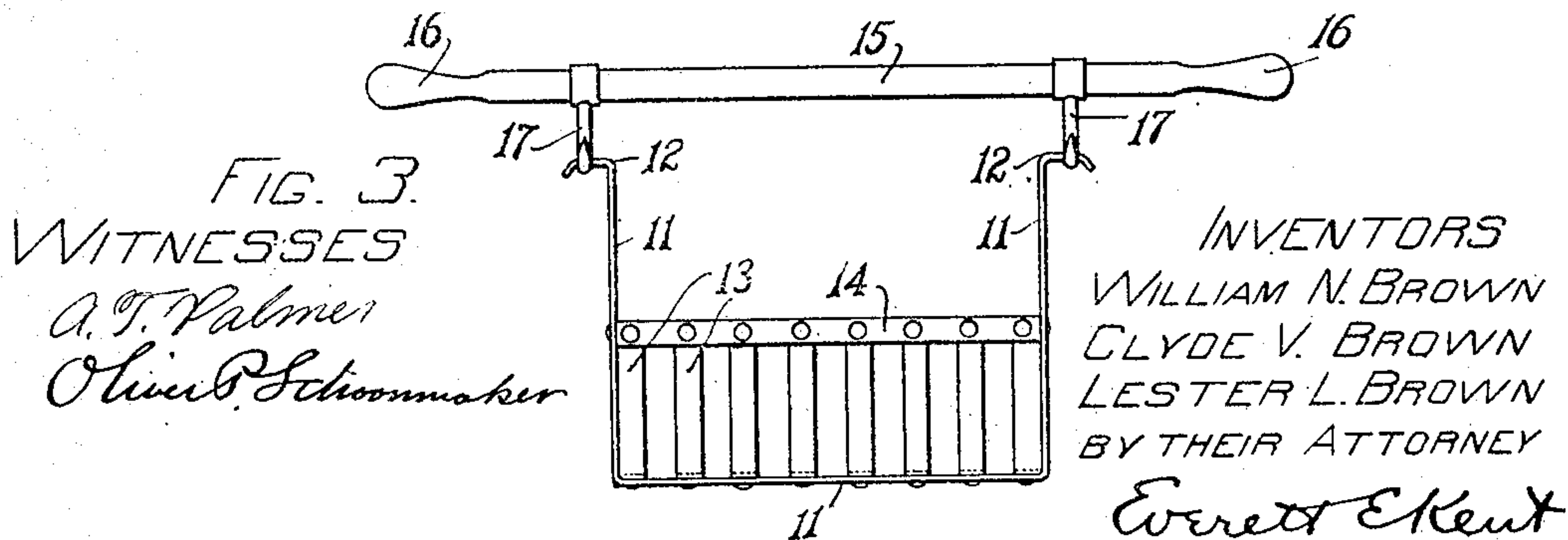
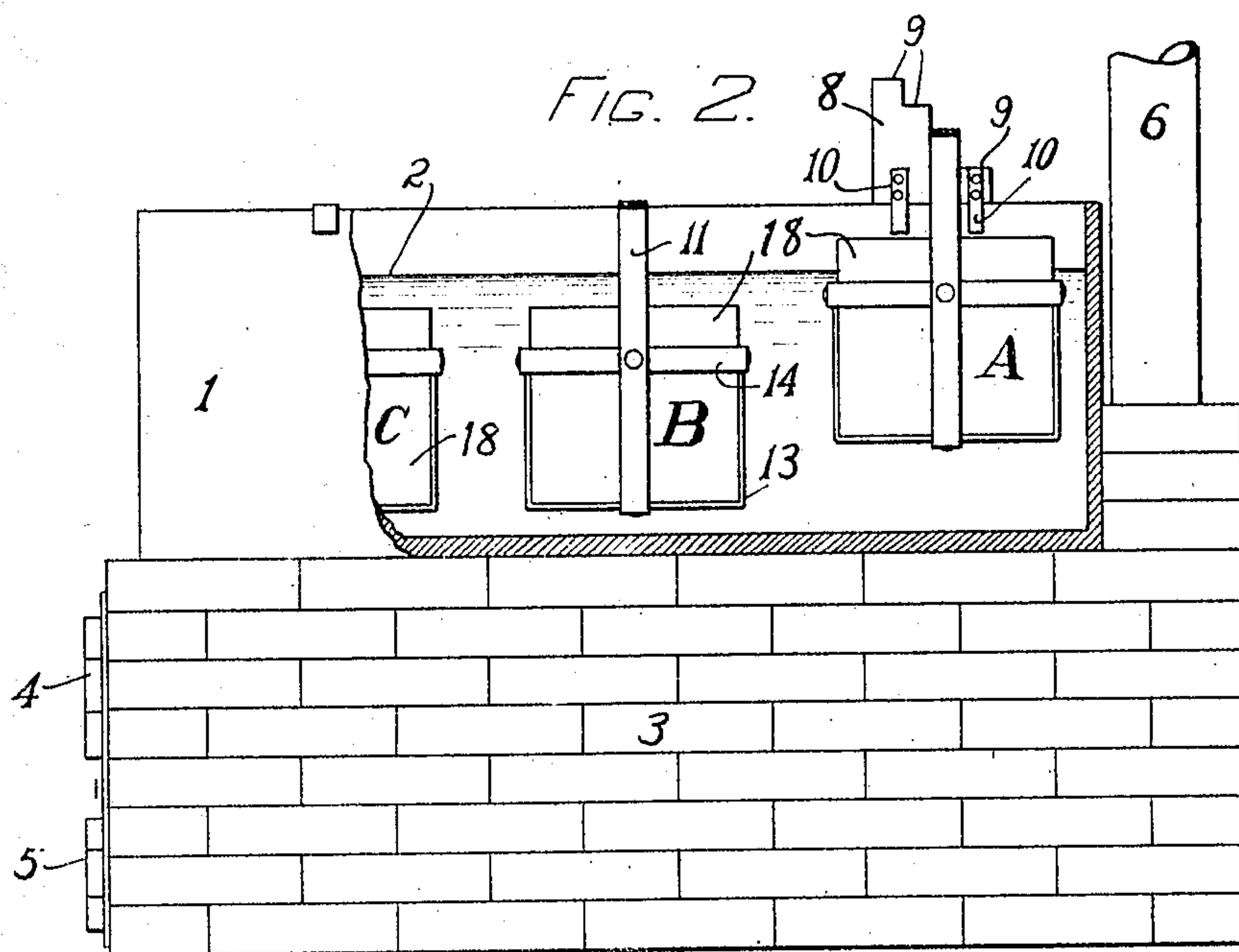
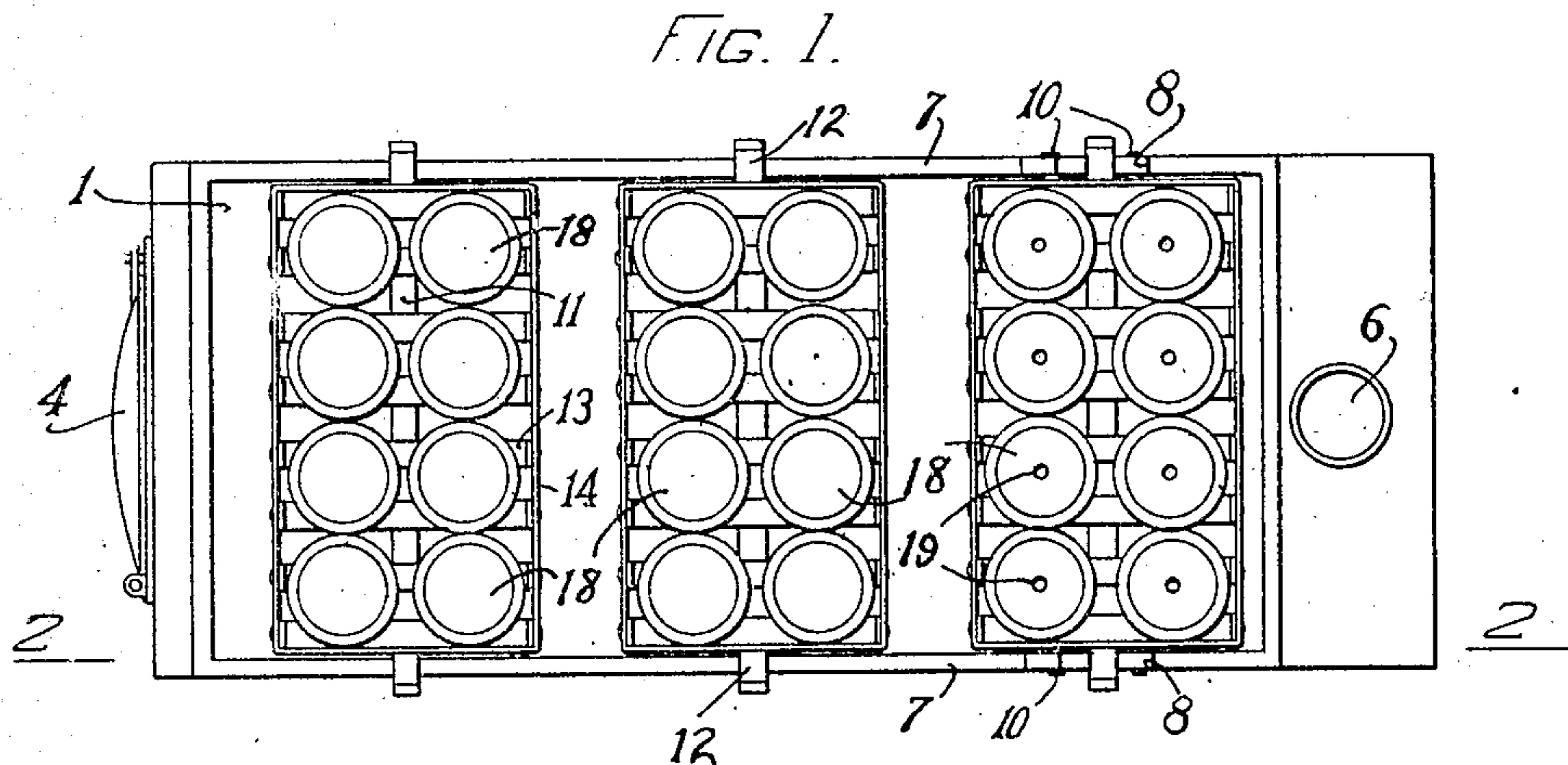
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CANNING APPARATUS.

APPLICATION FILED JUNE 28, 1906.

916,837.

Patented Mar. 30, 1909.





# UNITED STATES PATENT OFFICE.

WILLIAM N. BROWN, CLYDE V. BROWN, AND LESTER L. BROWN, OF HENDERSON, TEXAS.

## CANNING APPARATUS.

No. 916,037.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed June 28, 1906. Serial No. 323,862.

*To all whom it may concern:*

Be it known that we, WILLIAM N. BROWN, CLYDE V. BROWN, and LESTER L. BROWN, of Henderson, in the county of Rusk and State of Texas, have invented certain new and useful Improvements in Canning Apparatus, of which the following is a specification.

This invention relates to canning apparatus.

More particularly, it relates to apparatus for putting up and preserving fruits, vegetables or provisions in tin, glass or other cans.

The objects of the invention are to provide very simple apparatus, suitable for use at home without a factory equipment for thus preserving such articles.

To this end the invention comprises a boiler, certain trays for holding cans during the process, means for adjusting the same in position within the boiler, and means for handling the same, as more fully pointed out hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of the apparatus, showing cans and crates in place; Fig. 2 represents a side elevation of the same, with part of the boiler broken away, showing the water level, the section being taken at the place indicated by 2, 2 in Fig. 1; and Fig. 3 shows one of the crates and the device for managing the same, viewed in side elevation.

The drawings show one form of apparatus embodying the invention,—

An open boiler 1 is provided, adapted to hold water, the level of the water being conveniently arranged about as indicated at 2 in Fig. 2. The manner of determining the height of this level, and the importance of it, will be hereinafter explained. Any convenient means may be provided for heating the boiler, the means here shown consisting of a furnace having brick walls 3, provided with a fire door 4, ash door 5 and smoke stack 6. The furnace is arranged interiorly so as to throw the heat against the under side of the boiler in the manner well known. The boiler has parallel sides 7, 7, the tops of which are level, as shown in Fig. 2; and at the rear end stepped supports 8 rise above each wall, resting upon the top 7 of the side walls of the boiler. These supports have steps or horizontal surfaces 9, arranged at graduated distances from the level 7 of the boiler side. They may be maintained in place in any suitable manner. The method

shown in the drawings consists of two straps 10 which are fastened to each side of each support and project downward, loosely embracing the boiler wall outside and inside, thus preventing the support 8 from moving off of it sidewise, and, nevertheless, permitting said support to be adjusted to any desired position endwise thereon. If preferred, any other desired form of fastening might be used.

The apparatus also comprises three crates or hanging trays adapted to hold cans in which the fruit or other products are to be packed. These trays are preferably all alike and consist of a framework of band iron, as shown in the drawings, in which one band 11 passes longitudinally under the center of the tray and rises vertically at each end to a certain level 12, where it is bent sharply outward as shown clearly in Fig. 3, forming hook-handles adapted to engage and rest upon the side walls of the boiler. Cross-bands 13 are arranged upon it to form the bottom of the crate, and are bent upward at the sides and there fastened to a band 14 passing around the top of the tray considerably below the level 12. This crate or tray is intended to be immersed in water, and the open work structure provides free access for the water to the cans 18 which it holds; and by reason of the hooks 12 the bottom is supported horizontally to hold the cans at a fixed distance below the top of the boiler. By this feature of the invention a tray is provided which is supported from above with handles easily accessible for moving the same, and which, nevertheless, has no rods or bars crossing the top of the tray to interfere with the placing and removal of cans. It is also a feature of the invention that, if desired, these hook-handles may project outward far enough over the sides of the boiler to remain somewhat cool, and thus be handled with impunity, without the aid of any lifting appliance. It is, however, preferred to use a lifting pole 15, having handles 16 at each end, and equipped with hooks 17 spaced at proper distances for engaging the hook-handles 12 of the trays. By this each crate can be lifted from the water and removed from the boiler or changed in its position. The hooks 12 are also adapted to rest upon the steps 9 of the support 8, as shown for the crate A in Fig. 2. When so resting the level of the crate is raised within the boiler. The water line is arranged so that the level of the



top of the water will come between the position occupied by the tops of the cans, when the crate is in its lowest position, and the position occupied by the same when the tray is hooked up on one of the steps 9, thus bringing the tops of the cans in this raised tray slightly above the water line while the main body of each can is immersed thereunder. Varied heights of the steps above the level 7 make the device universally adaptable to all sizes of cans, so that whatever the height of the cans the crate can be adjusted so that the tops of the cans will barely protrude above the water level; and similar adjustment can be made as the level of the water falls by evaporation or otherwise. This position is known as the "exhausting" position of the cans. The position when the cans are completely immersed is known as their "cooking" position. The boiler and the trays are preferably so apportioned in size that one boiler may contain three trays at once, one being in the exhausting position and two in the cooking position. We have discovered that by maintaining three trays filled with cans in these positions, which are here designated respectively positions A, B and C, all parts of the boiler can be utilized constantly, thus avoiding the waste of heat and fuel inevitable if only part of a boiler is utilized; and at the same time avoiding duplication of the apparatus by providing separate boilers for exhausting and for cooking, as both processes go on at once in the same boiler, according to our invention. The trays are moved progressively to position A, position B and position C, and then to A again. As all trays are changed at approximately the same time it will be evident from the structure here described that each tray remains for one unit of time in the position A, with its cans partly immersed, and for two units of time in the wholly immersed position represented by B and C.

The method of using the apparatus is as follows: Cans having been filled with uncooked fruit or vegetables, and a crate filled with such cans, the crate is lifted by hooking the pole hooks under the handles 12 on the crate and lifting the same into position A, setting the crate hooks 12 on such one of the steps 9 as will bring the level of the cans just above the water.

The tops of the cans are supposed to have previously been closed, except for a small vent hole 19. The water in the boiler should be kept boiling. This causes the contents of each can to expand and causes the air and gases to be exhausted from the can through the vent hole. This process continues for a predetermined unit of time, when the vent hole in each can is sealed with solder without removing the cans from the crate, after which the crate containing the cans is changed to position B or C where it remains during the succeeding two units of time, during which two other crates are put through the exhausting process. After these two units of time have elapsed the cooking of the contents of the first crate is completed, the latter is removed, filled with fresh cans, re-installed in position A, and put through the same procedure.

We claim:

1. In apparatus of the class described, a crate comprising a framework, having a bar passing centrally through the under portion thereof and rising at the ends thereof above the level thereof and being there bent outward longitudinally forming horizontal lugs, the framework being supported on the central portion of said bar; in combination with a pole separate from the above elements and having depending hooks at a distance apart adapted to engage said lugs.

2. In apparatus of the class described, in combination, an open boiler having parallel sides with level tops, blocks resting loosely on opposite sides, there being lugs fastened to each side of each block and projecting down loosely embracing the boiler wall; the tops of said blocks being graduated in steps with level tops rising progressively higher; and can-holding crates adapted to enter the boiler from the top, having lugs adapted to rest upon said steps.

In testimony whereof we have affixed our signatures, in presence of two witnesses.

WILLIAM N. BROWN.  
CLYDE V. BROWN.  
LESTER L. BROWN.

Witnesses:

FRANK L. YOUNG,  
ROBT. T. BROWN.