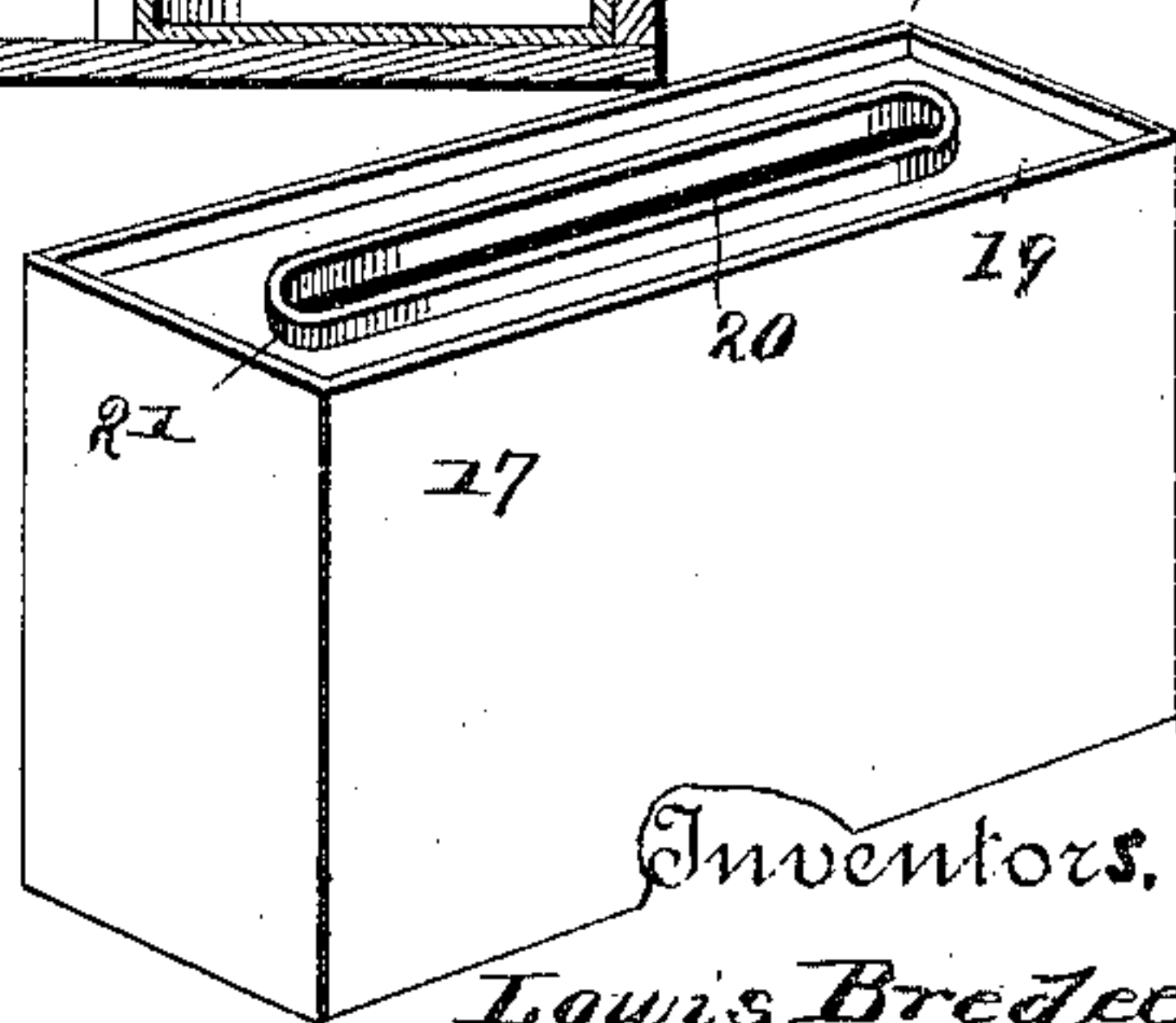
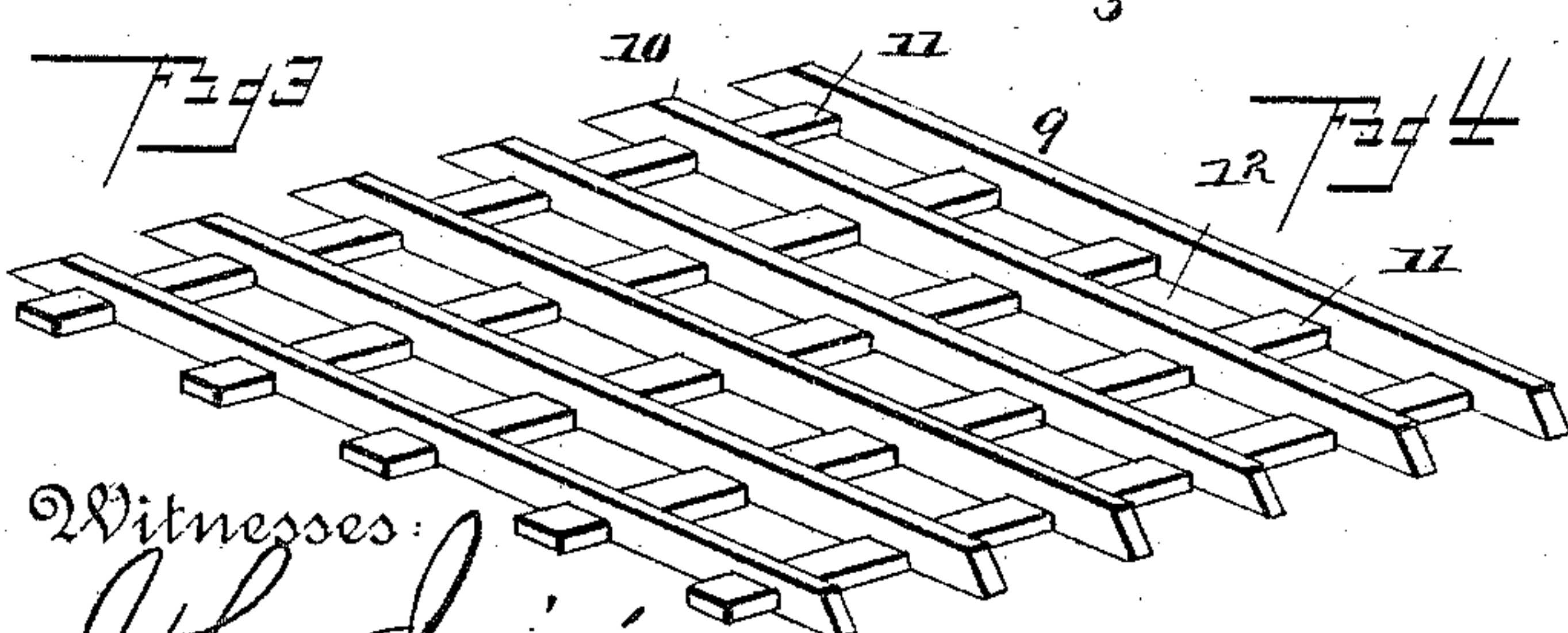
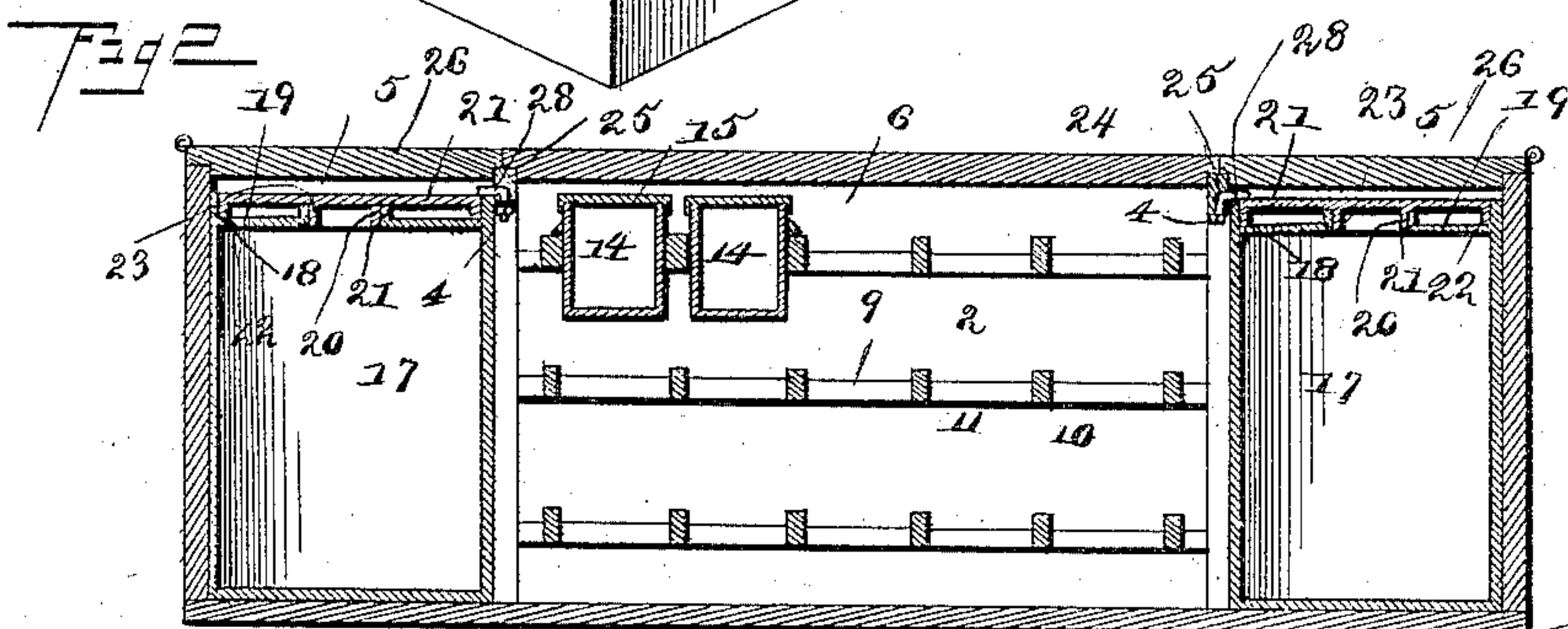
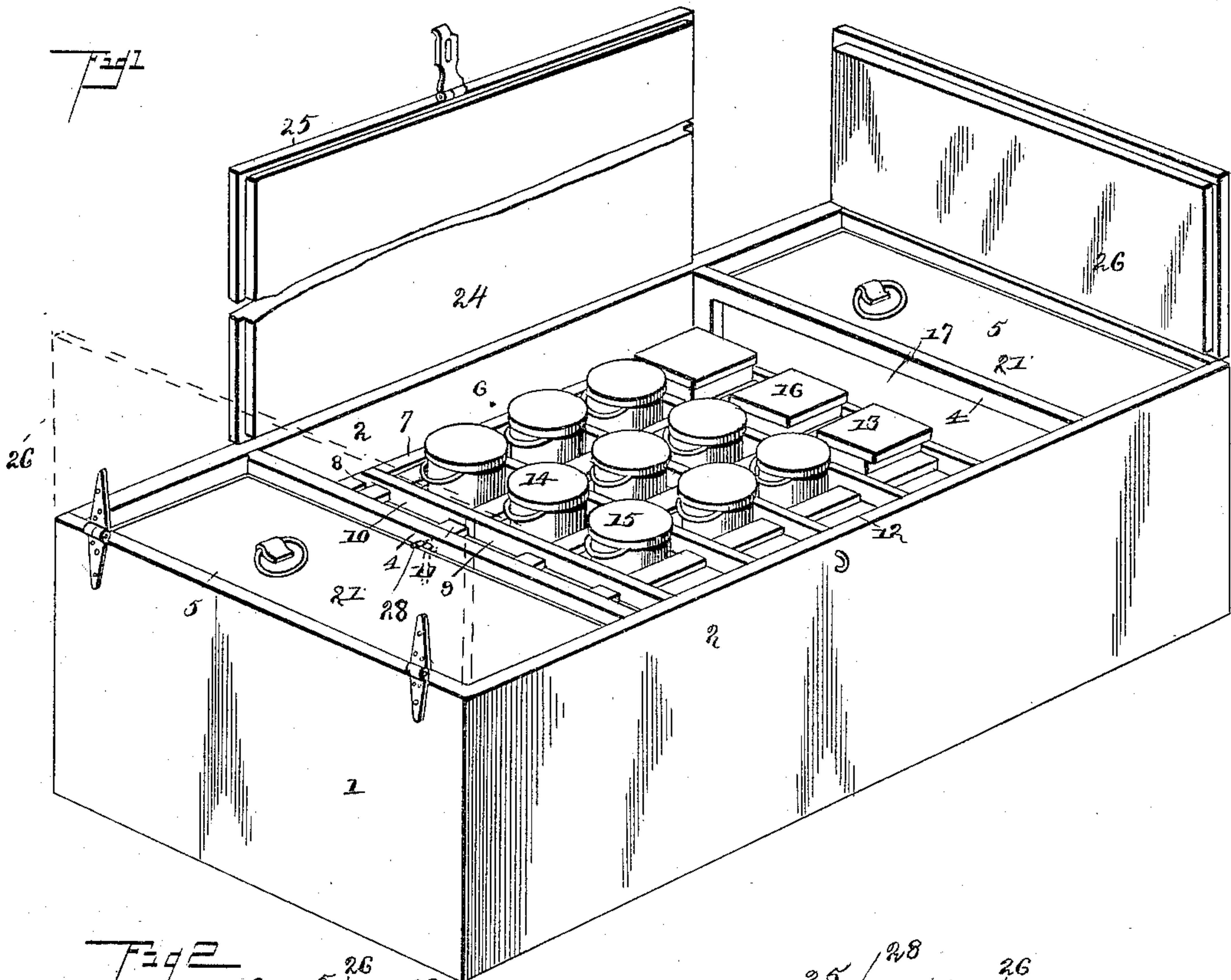


(No Model.)

L. BREDEEN & A. MORRISON.
REFRIGERATOR.

No. 432,722.

Patented July 22, 1890.



Witnesses:

John Imrie
W. S. Duval

By their Attorneys

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Inventors.

Louis Bredeen
A. Morrison

UNITED STATES PATENT OFFICE.

LOUIS BREDEEN AND ARTHUR MORRISON, OF OKLAHOMA CITY, INDIAN TERRITORY.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 432,722, dated July 22, 1890.

Application filed October 31, 1889. Serial No. 328,740. (No model.)

To all whom it may concern:

Be it known that we, LOUIS BREDEEN and ARTHUR MORRISON, citizens of the United States, residing at Oklahoma City, in the country of Oklahoma, Indian Territory, have invented a new and useful Refrigerator, of which the following is a specification.

Our invention has relation to crates of that class adapted for the shipment of butter, though, as will be hereinafter apparent, certain novel features of the invention may be employed in crates adapted for the shipment of fruit and other perishable articles.

Among the objects in view are to provide for a refrigeration during transit and to adapt the crate for the reception of packages of butter or other articles to be carried and for a thorough circulation of cold air in and around the same.

Further objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a perspective of a crate constructed in accordance with our invention, the same being open and exposing the interior. Fig. 2 is a longitudinal vertical section. Fig. 3 is a detail in perspective of one of the pail-receiving frames, said frame being shown in an inverted position. Fig. 4 is a detail of one of the ice-chambers.

Like numerals indicate like parts in all the figures of the drawings.

The crate or casing proper is of any desired shape and dimensions, and in this instance is rectangular, consisting of the end walls 1 and the two connecting side walls 2, the side and end walls being provided with the usual bottom 3.

4 represents a pair of rectangular open frames of a size to fit snugly between the opposite side walls 2 and flush with their upper edges, said frames dividing the crate into three compartments, representing two end compartments 5 and a central compartment 6. The central compartment has its opposite side walls provided with corresponding pairs of longitudinal strips 7, each pair being oppositely notched, as at 8, and mounted in each pair are frames 9, there being three frames in this instance, and each formed by

a series of transverse strips 10 and longitudinal strips 11, mortised together at their points of juncture, the transverse strips being chamfered at their ends and adapted to removably rest in the notches or recesses 8 of the longitudinal strips 7. By the employment of the strips 10 and 11 a series of rectangular spaces 12 are formed in each frame 9, and in the spaces are adapted to snugly fit a series of rectangular pails 13 and a series of cylindrical pails 14, or the entire series may be either cylindrical or rectangular, as desired. The pails may be of any construction desired, and are preferably provided with the usual swinging lifting-bails and removable covers 15 and 16, respectively.

In the compartments 5, occurring at the ends of the crate or casing, are located removable closely-fitting metallic ice-chambers 17, the upper ends of which at their outer edges are flanged, as at 18, and provided with a top 19 slightly below the plane of the flanges, which top is provided with an elliptical opening 20, surrounded by a flange 21, extending at each side of the top and forming a means for the introduction of crushed ice or other refrigerative agent.

21 represents a cover adapted to removably fit within the flange 18, the edges of the cover being turned down to form flanges 22 for this purpose. From the under surface of the cover there depends an elliptical flange 23, adapted to snugly fit within the elliptical opening of the top, and by this means it will be apparent that a practically air-tight cover without packing is produced.

24 represents a cover hinged to one of the side walls 2 of the casing and adapted to snugly fit within the compartment 6 and provided with edges 25, extending over the upper edges of the frames 4 and the side walls 2.

26 represents opposite hinged covers adapted to fit snugly within the compartments 5, the edges of the cover being provided with outwardly-extending flanges occupying the remaining portions or upper edges of the frames 4, side walls 2, and end walls 1. By this it will be apparent that the contents of the crate may be inspected and portions sold without disturbing the refrigerating compartments, and that the ice-tanks may be refilled without

raising the temperature to any material extent of the central compartments.

28 represents L-shaped wires pivotally mounted in the upper edges of the open frames 4, the ends of the wires being adapted to be swung over upon the covers 21 of the ice tanks or chambers, so as to bind the same snugly upon said chambers.

Having described our invention, what we claim is—

In a shipping-crate, the combination, with the outer casing, the opposite open partitions forming the two end and central compartments, and the opposite cleats secured to the

inner sides of the casing, of the independent side and central top covers, the removable ice-tanks located and fitting the end compartments, the series of removable racks having openings, and vessels mounted in said openings, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

LOUIS BREDEEN.

ARTHUR MORRISON.

Witnesses:

JOHN P. JONES,

D. F. MACMURTRIE.