

No. 813,194.

PATENTED FEB. 20, 1906.

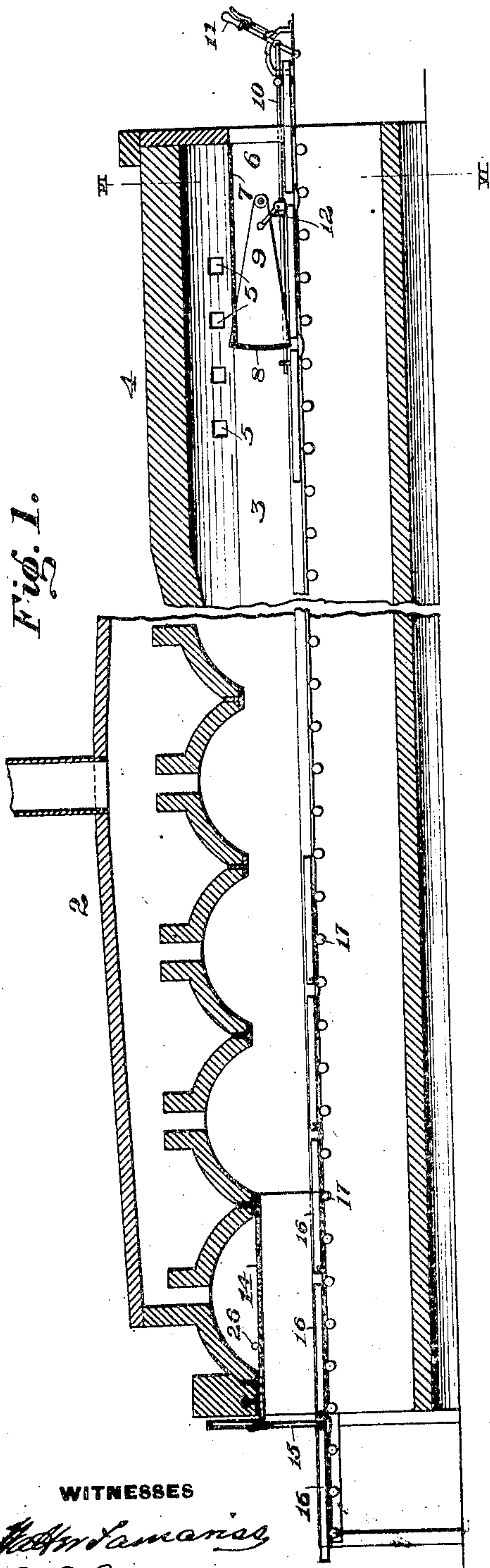
W. M. ANDERSON.

LEER.

APPLICATION FILED AUG. 16, 1905.

2 SHEETS—SHEET 1

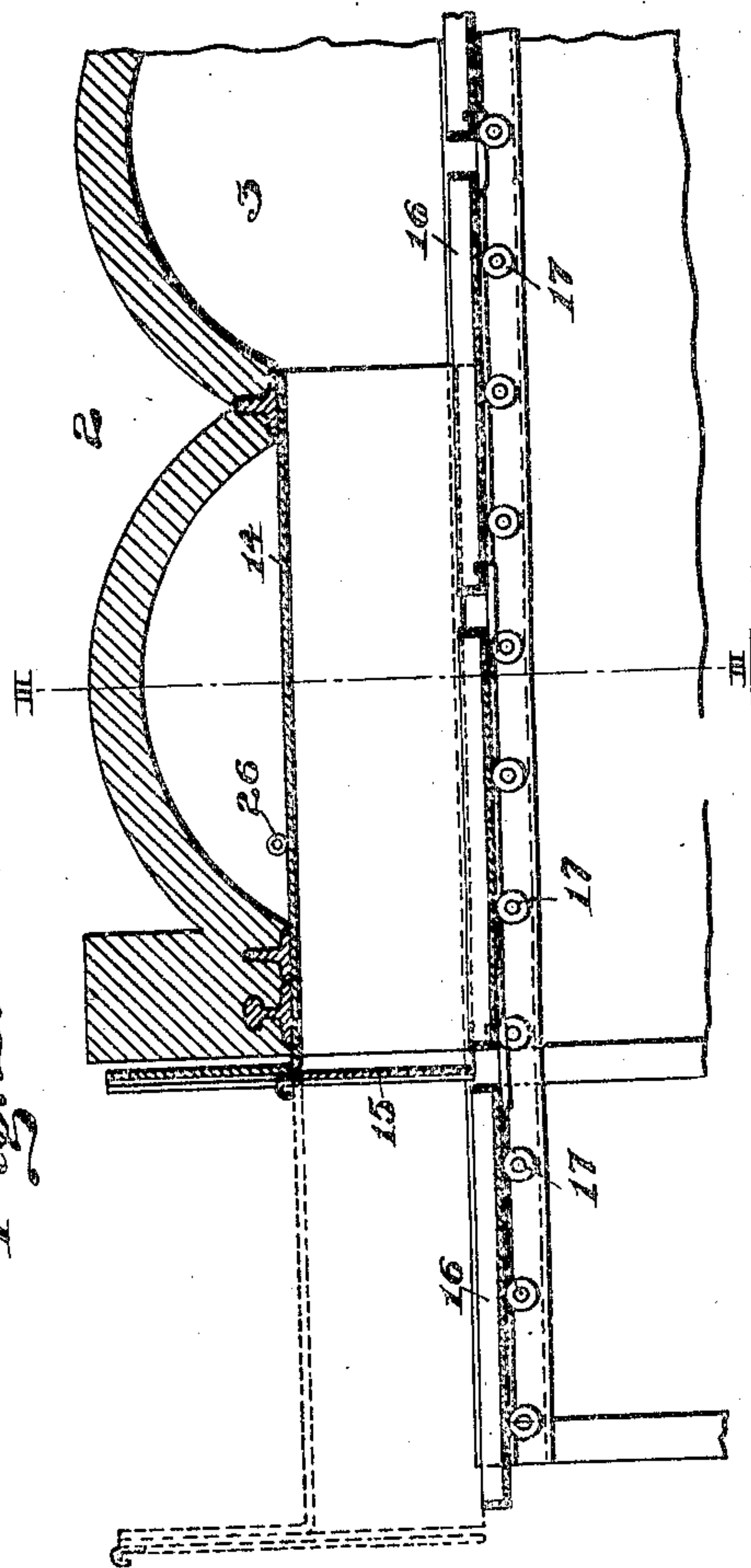
Fig. 1.



WITNESSES

Wm. J. Samaras
C. E. Eggers.

Fig. 2.



INVENTOR

William M. Anderson
by *James R. Borker*
his attorney

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2 SHEETS—SHEET 2.

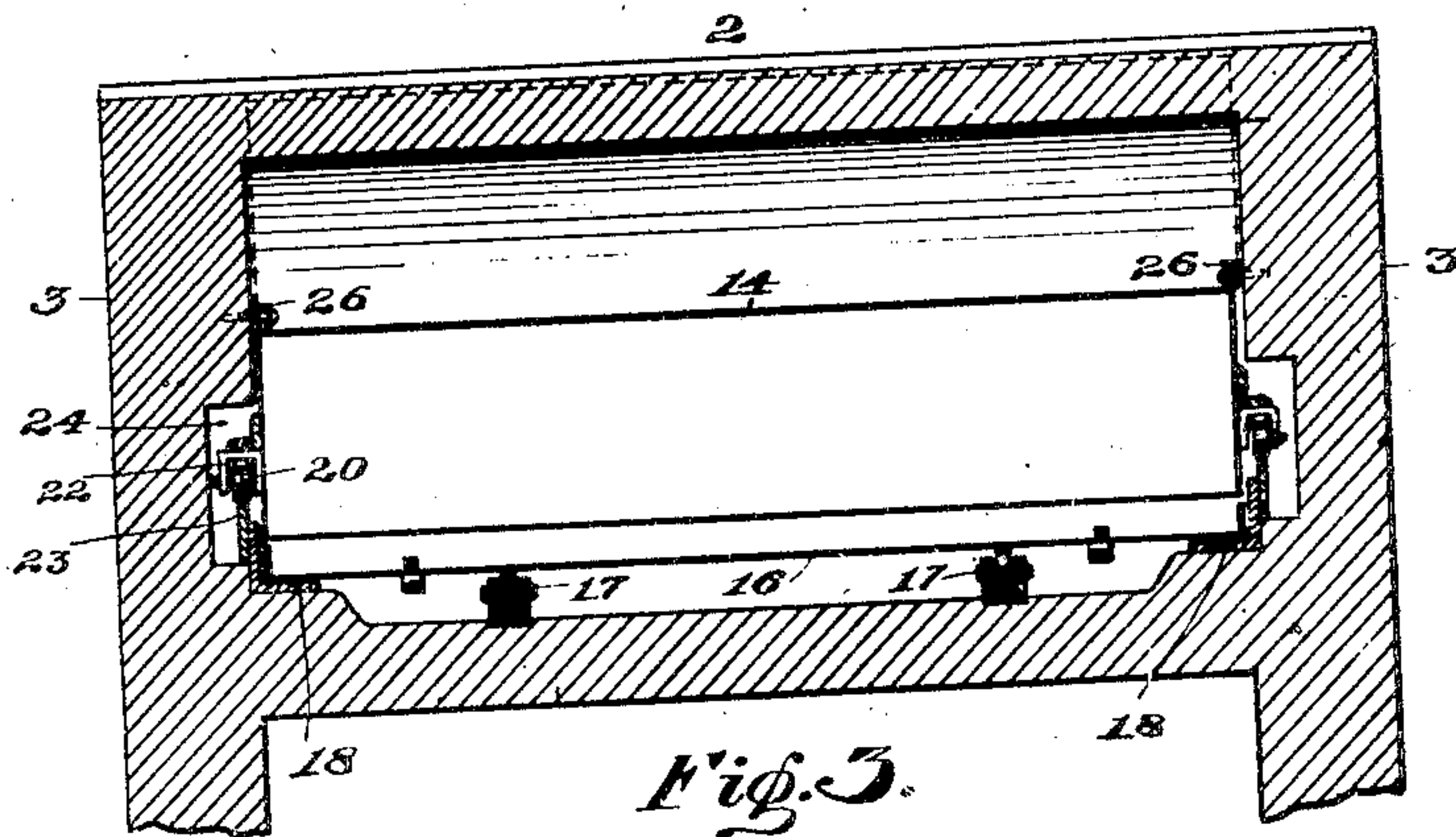


Fig. 3.

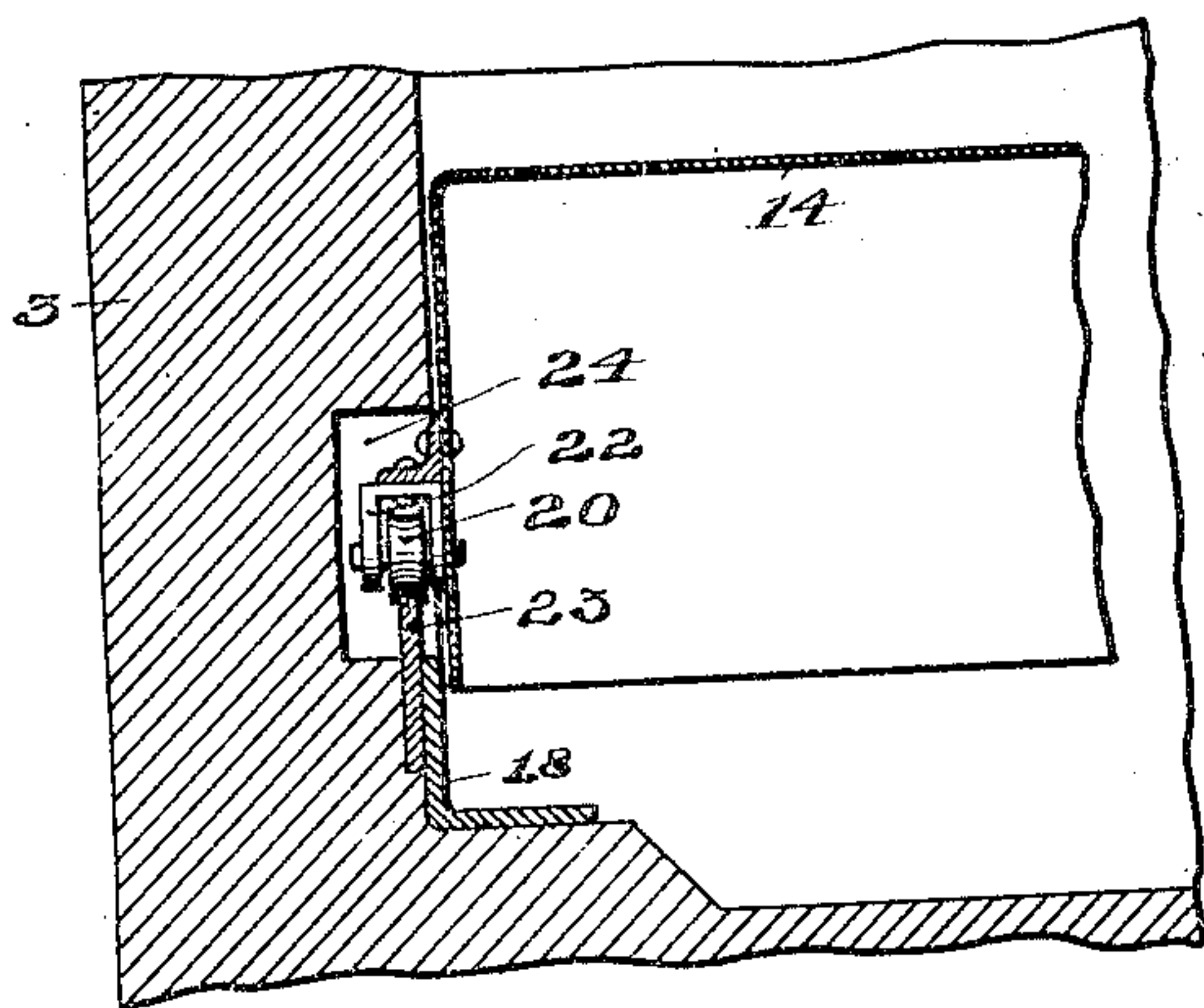


Fig. 4.

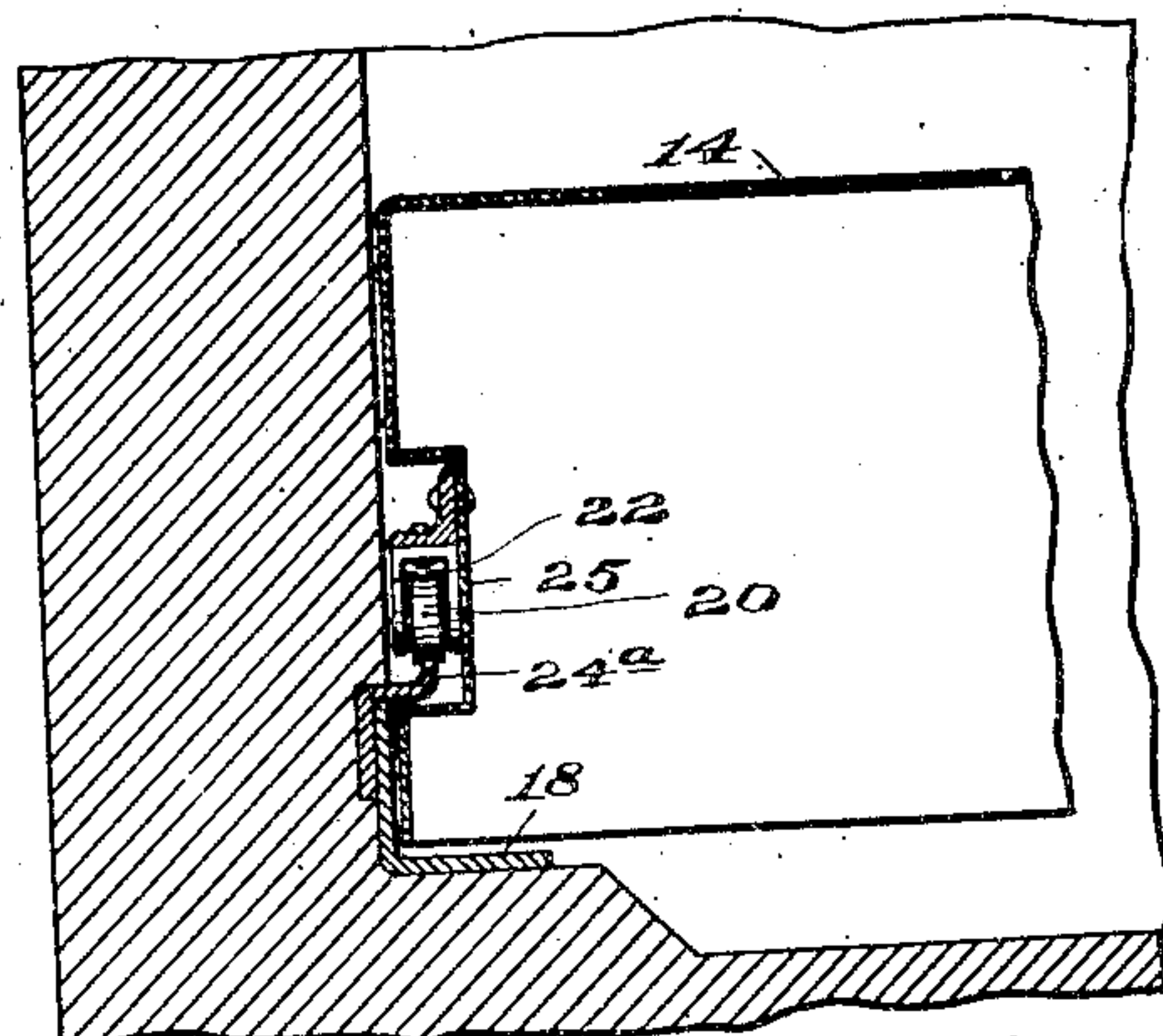


Fig. 5.

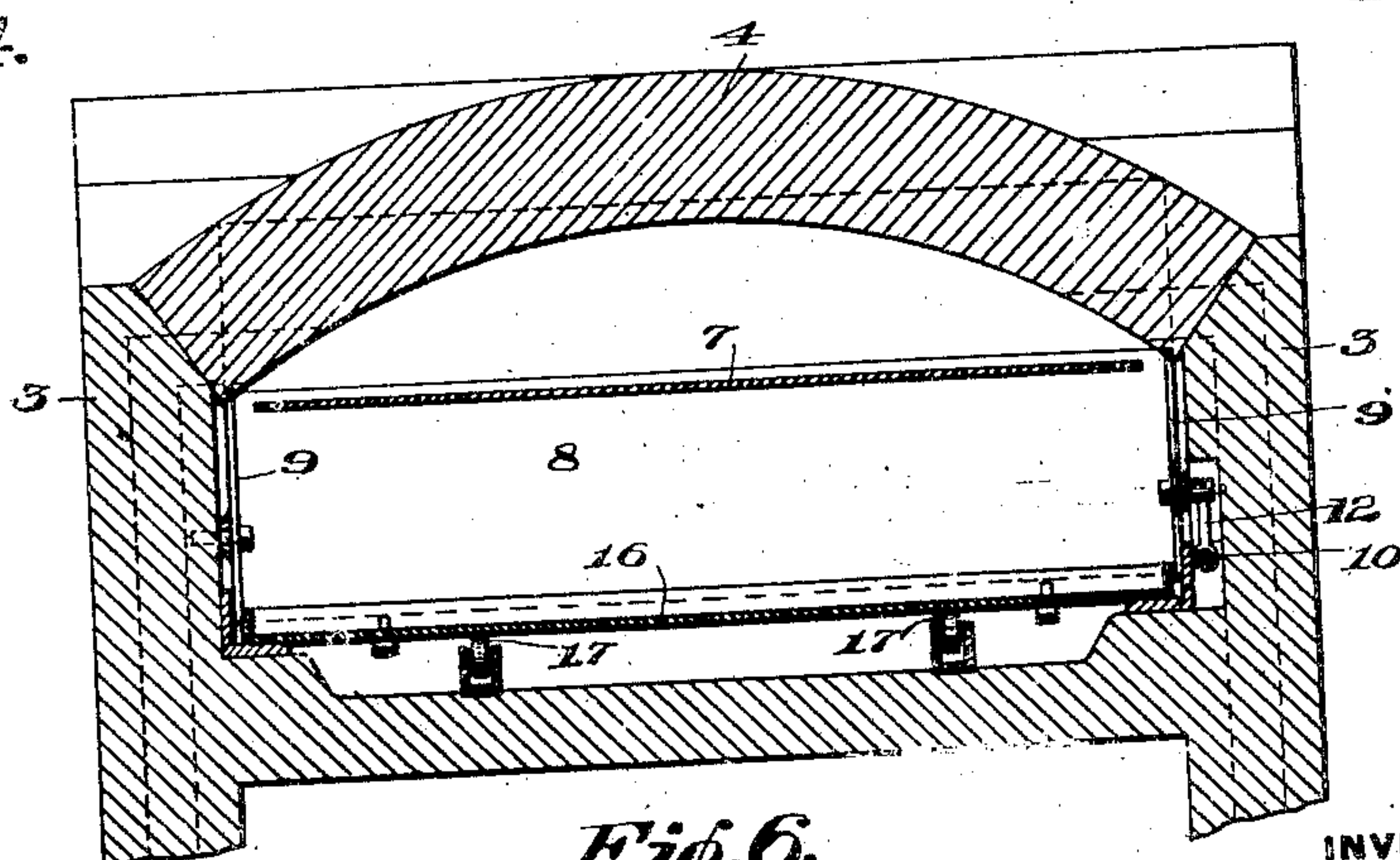


Fig. 6.

WITNESSES

Walter Samarioss
C. E. Eggers

INVENTOR

William M. Anderson
by James C. Rasmussen
his attorney

UNITED STATES PATENT OFFICE.

WILLIAM M. ANDERSON, OF PITTSBURGH, PENNSYLVANIA.

LEER.

No. 813,194.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed August 16, 1905. Serial No. 274,377.

To all whom it may concern:

Be it known that I, WILLIAM M. ANDERSON, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Leer, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical sectional view illustrating my invention. Fig. 2 is an enlarged view of a portion of the same. Fig. 3 is a vertical cross-sectional view on the line III III of Fig. 2. Fig. 4 is a vertical cross-section showing one of the supports of the protector, enlarged. Fig. 5 is a like view of a modified form. Fig. 6 is a vertical sectional view on the line VI VI of Fig. 1.

Like symbols of reference indicate like parts wherever they occur.

My invention relates to an improvement in leers for annealing glassware; and it consists in devices by means of which currents or drafts of air are prevented from entering the leer and by means of which the glassware may be removed from the leer without permitting the entrance of cold air.

I will now describe my invention, so that others skilled in the art may manufacture and use the same.

In the drawings, 2 represents the leer, having side walls 3 and roof 4. At the front end of the leer are the flues 5, by means of which the leer is heated. This leer may be of any desired form. At the front end of the leer is a closed entrance 6, having a suitable top or cover 7. At the inner end of this entrance 6 is a door 8, secured to the outer ends of the arms 9, which arms at their other ends are pivoted, preferably, to the side walls of the leer. The arms 9 may be so raised and lowered as to move the door 7 upwardly on the arc of a circle by means of the sliding rod 10, which is operated by the lever 11, situate outside the leer. Inside of the entrance 6 and pivoted to the arm 10 is a lever 12, the other end of which is pivoted to one of the arms 9 in such a manner that by the movement of the rod 10 inwardly the arm 12 is brought to a vertical position, thus lifting the arms 9 and elevating the door 7 sufficiently to allow the entrance of the pan containing the ware to be annealed. The entrance 6 and door 7 together form a secure closure of the leer sufficient to prevent the entrance of any draft during the charging operation. At the other or rear end of the leer is a longitudi-

nally-movable cover or casing 14, which may be formed of metal, and it is closed at the sides and top, open at the bottom and inner end, and provided with a vertically-movable door 15 at the end outside of the leer. The sides of this casing 14 are arranged to extend downwardly to inclose the glassware in the pans 16, which pans bear on wheels 17 and slide on tracks 18 on the floor of the leer. This cover or casing 14 is supported by the sheaves 20, which sheaves are mounted between the side of the cover and a bracket 22 and are arranged to run on the track 23, which extends longitudinally in a recess 24 in the side walls of the leer.

In Fig. 5 I show a modified form, in which the track 24^a instead of being arranged in a recess in the side walls extends outwardly from the wall and a recess 25 is formed in the sides of the casing 14. This modification is applicable to leers which have not been specially built with reference to the use of my invention and in which recesses have not been formed in the side walls of the leer. The casing 14 is adapted to be drawn out and pushed back in the rear end of the leer, and it is further guided by the guide-rollers 26, which are mounted on suitable journals extending from the side walls of the leer and are adapted to prevent the lifting of the casing during the longitudinal movement of the same.

The operation is as follows: The pan for containing the glassware is brought into the inclosed entrance 6, where it is allowed to remain during the time the pan is being filled. As this entrance is in the hottest portion of the leer, the glass is heated preparatory to its entrance into the inner portion of the leer. After the pan has been filled the door 7 is lifted sufficiently to enable the pan to be pulled through the leer and then closed to prevent the admission of air. As the loaded pan reaches the other and cooler end of the leer it passes under the casing 14. This casing, the door 15 being closed, together with the pan 16, is drawn outwardly until the pan is outside of the leer, about half or a portion of the casing remaining within the leer. The door 15 is then elevated sufficiently to clear the pan and the glassware contained therein. The casing is pushed back into the leer and the door 15 is lowered, thus again closing the end of the leer and leaving the pan containing the glass outside of the leer.

The advantages of my invention result from the construction which enables the

glassware to enter the leer through an entrance-chamber having a doorway situate within the leer and to leave it at a doorway without the leer and also from the special devices by means of which this is accomplished. It will be apparent from the foregoing description that various changes may be made by those skilled in the art without departing from my invention.

10 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a leer, a movable casing, adapted to inclose the glass, and to be drawn outwardly with the glass, and to be pushed back into the leer, leaving the glass outside the leer, substantially as specified.

2. In a leer, a movable casing adapted to inclose the glass in the leer, having an open end to permit the passage of the glass in the leer to the interior of the casing, and having a door adapted to keep the outer end of the leer closed, said casing being adapted to be drawn

outwardly with the glass and to be pushed back into the leer, leaving the glass outside the leer, the door being opened to permit the retraction of the casing; substantially as specified.

3. In a leer, an inclosed entry located within the leer, a door secured to the outer end of longitudinal and pivoted arms, and devices for raising and lowering the arms; substantially as specified.

4. In a leer, a longitudinally-movable casing, supported by rollers mounted on tracks secured to the side walls of the leer, said casing being adapted to inclose the glass during its passage from the leer substantially as specified.

In testimony whereof I have hereunto set my hand.

WILLIAM M. ANDERSON.

Witnesses:

A. M. STEEN,

JAMES K. BAKEWELL.