No. 891,693. PATENTED JUNE 23, 1908.

A. H. HEISEY.

DOOR ARRANGEMENT FOR GLASS LEERS.

APPLICATION FILED JUNE 27, 1907.

FIG. 1

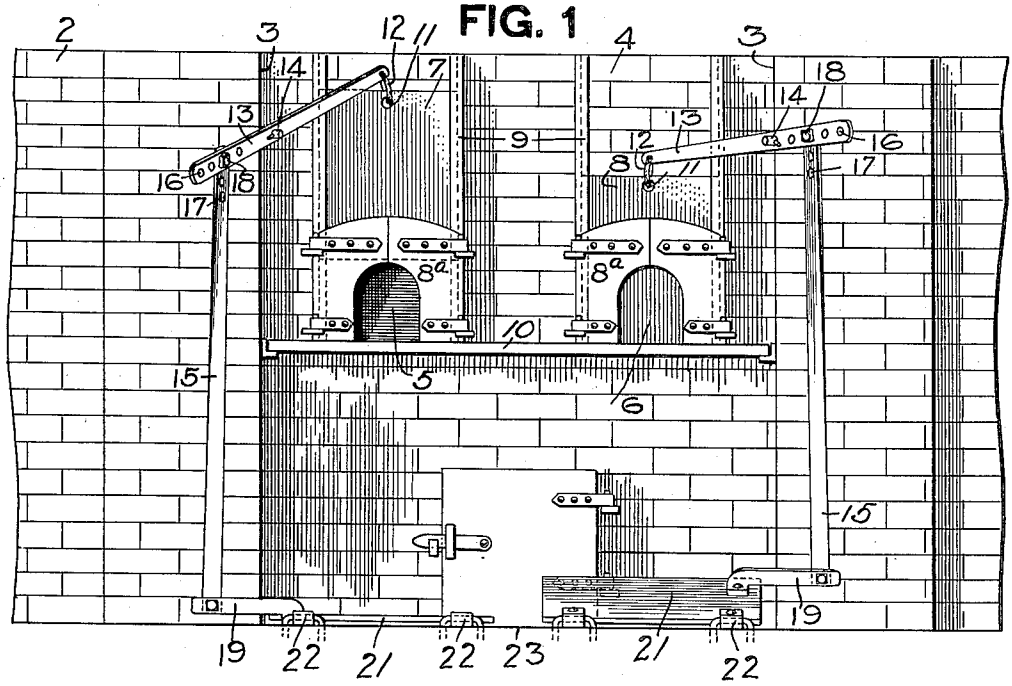
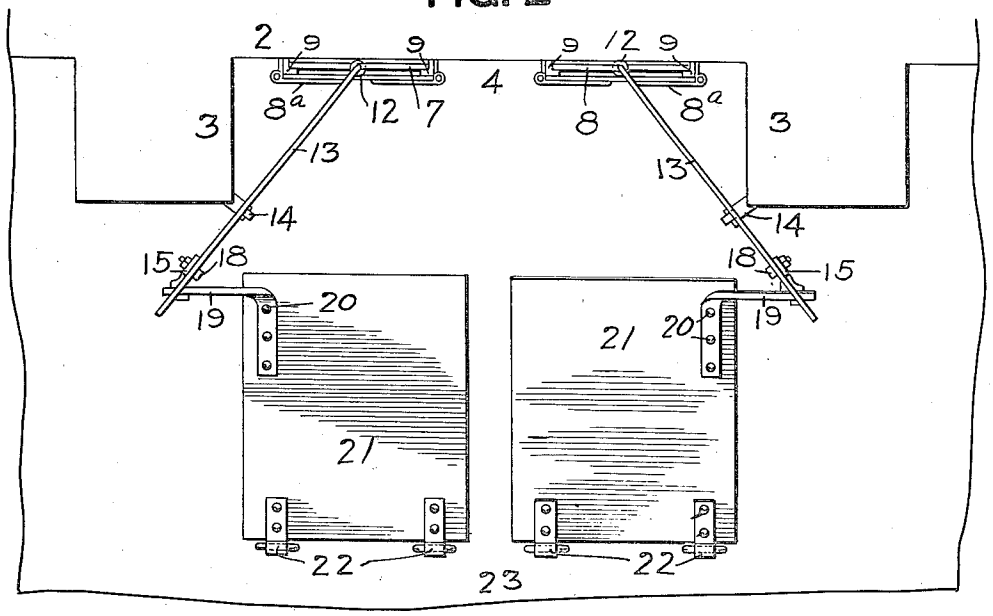


FIG. 2



WITNESSES.

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DOOR ARRANGEMENT FOR GLASS-LEERS.

No. 891,693. Specification of Letters Patent. Patented June 23, 1908.

Application filed June 27, 1907. Serial No. 381,140.

To all whom it may concern:

Be it known that I, AUGUSTUS H. HEISEY, a resident of Idlewood, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Door Arrangement for Glass-Leers, &c; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to leers or annealing ovens for glassware, and especially to means for opening and closing the opening through which the ware is introduced into the leer.

The object of the invention is to provide for opening and closing the ware receiving opening automatically by the person approaching or leaving the leer, so that said opening is open only long enough to insert the ware and is automatically closed upon the departure of the person from in front of the leer, so that there is no liability of cold air rushing into the leer and chilling the same or injuring the ware therein.

The invention comprises, generally stated, a leer having the usual opening closed by the ordinary hinged doors provided with openings through which the ware is placed in the leer, said leer being provided to the rear of the hinged doors with a sliding shutter, a depressible platform being arranged in front of the ware receiving opening of the leer and connected to the sliding shutter, so that a person approaching the leer to insert ware therein is compelled to step upon said platform and through the connections open the shutter, and upon leaving releasing said platform, thereby permitting the shutter to automatically close.

In the accompanying drawing Figure 1 is a front view of a leer having my invention applied thereto; and Fig. 2 is a plan view of the door arrangement.

In the drawings is shown a portion of a common form of leer used in glass factories, the front thereof being shown at 2 with the walls 3 projecting out to form the recessed portion 4. The ware receiving openings are shown at 5 and 6, these being as usual formed in swinging double doors 8. It has heretofore been the practice not to close said openings 5 and 6 but to allow the same to remain open to receive the ware. In case these openings are not large enough to permit the passage of large sized ware then one or both of the swinging doors can be opened to present larger openings for the introduction of the ware. The result is that drafts are liable to enter the leer, causing waste of heat and also considerable breakage of the ware. I overcome this by providing automatic means for closing the ware receiving openings. This means comprises a shutter 7 mounted to slide vertically in guides 9 directly to the rear of the swinging doors 8, one such shutter being provided for each opening and in its closed position resting upon the ledge or sill 10. Secured to each shutter 7 is a ring 12 to which is connected one arm of a lever 13, said lever being pivoted to the bracket 14 at the corner of the projecting wall 3 and having connected to its outer end a bar or rod 15. In order to provide for adjustment the lever 13 has a series of openings 16 and the rod 15 is provided with a series of openings 17 so that the pin 19 connecting these parts may be changed to vary the leverage according to the height to which the shutter is to be lifted.

The lower end of the rod 15 is connected to an arm 19 secured by rivets 20 to a depressible platform 21. This platform may be formed of plate metal or other suitable material and is hinged at 22 to the floor or foundation 23. The weight of the shutter 7 when closed is sufficient to hold the forward end of the platform 21 at a suitable height above the floor. This platform is located directly in front of the ware receiving opening in the leer and at such a distance therefrom that the person carrying the ware to be introduced into the leer is compelled to step upon the platform in order to introduce the ware into the leer. This depresses the platform and the latter through the connections described raises the shutter 7 sufficiently to permit the ware to be placed upon the leer pans within the leer. As soon as the person leaves the front of the leer the shutter 7 through its weight automatically drops, thereby closing the opening to the leer. In this manner therefore the shutter is opened automatically and only when the carrier has arrived in position in front of the leer to insert the ware, so that the ware receiving opening is not opened before it is absolutely necessary, and furthermore said opening is closed immediately upon the departure of the attendant from the leer. By operating the leer automatically as described I effect a minimum loss or waste of heat and breakage of ware, which, under the old form of leers, is due to the fact that in stormy weather direct drafts enter the leer and drive the heat so far back

to the cooling end of the leer that the ware when taken out is still so hot that it breaks when exposed to the atmosphere. With my improvements if the openings 5 and 6 are too small to conveniently insert the ware, one or both of the doors 8 may be swung open to permit the insertion of the large ware, the shutter 7 still acting in the manner described to close the enlarged opening with beneficial results in saving heat, breakage, etc.

It is apparent that various forms of connections between the depressible platform and the shutter may be employed and I do not wish to be confined to any particular means for this purpose.

What I claim is:

1. The combination of a leer provided with a ware receiving opening, a vertically slidable shutter for closing said opening, a depressible platform located at the floor directly in front of the ware receiving opening in the line of approach of the attendant, and connections between said depressible platform and said shutter.

2. The combination of a leer provided with a ware receiving opening, a vertically sliding shutter arranged to close said opening, a lever connected to said shutter, a depressible platform located at the floor directly in front of the ware receiving opening in the line of approach of the attendant, and connections between said depressible platform and said lever.

3. The combination of a leer provided with a ware receiving opening, an automatically closing shutter for said opening, a depressible platform located at the floor directly in front of the ware receiving opening in the line of approach of the attendant, and connections between said depressible platform and said shutter.

4. In a leer, the combination of outside swinging doors provided with an opening leading into the leer, a vertically movable shutter mounted inside of said swinging doors and mechanism for raising and lowering said shutter.

5. The combination of a leer provided with a ware receiving opening, swinging doors provided with an opening leading into the leer, a vertically movable shutter mounted inside of said swinging doors, a depressible platform in front of the leer opening, and connections between said depressible platform and said shutter.

In testimony whereof, I the said AUGUSTUS H. HEISEY have hereunto set my hand.

AUGUSTUS H. HEISEY.

Witnesses:
MAUDE BOTTS,
CARL NORPELL.