

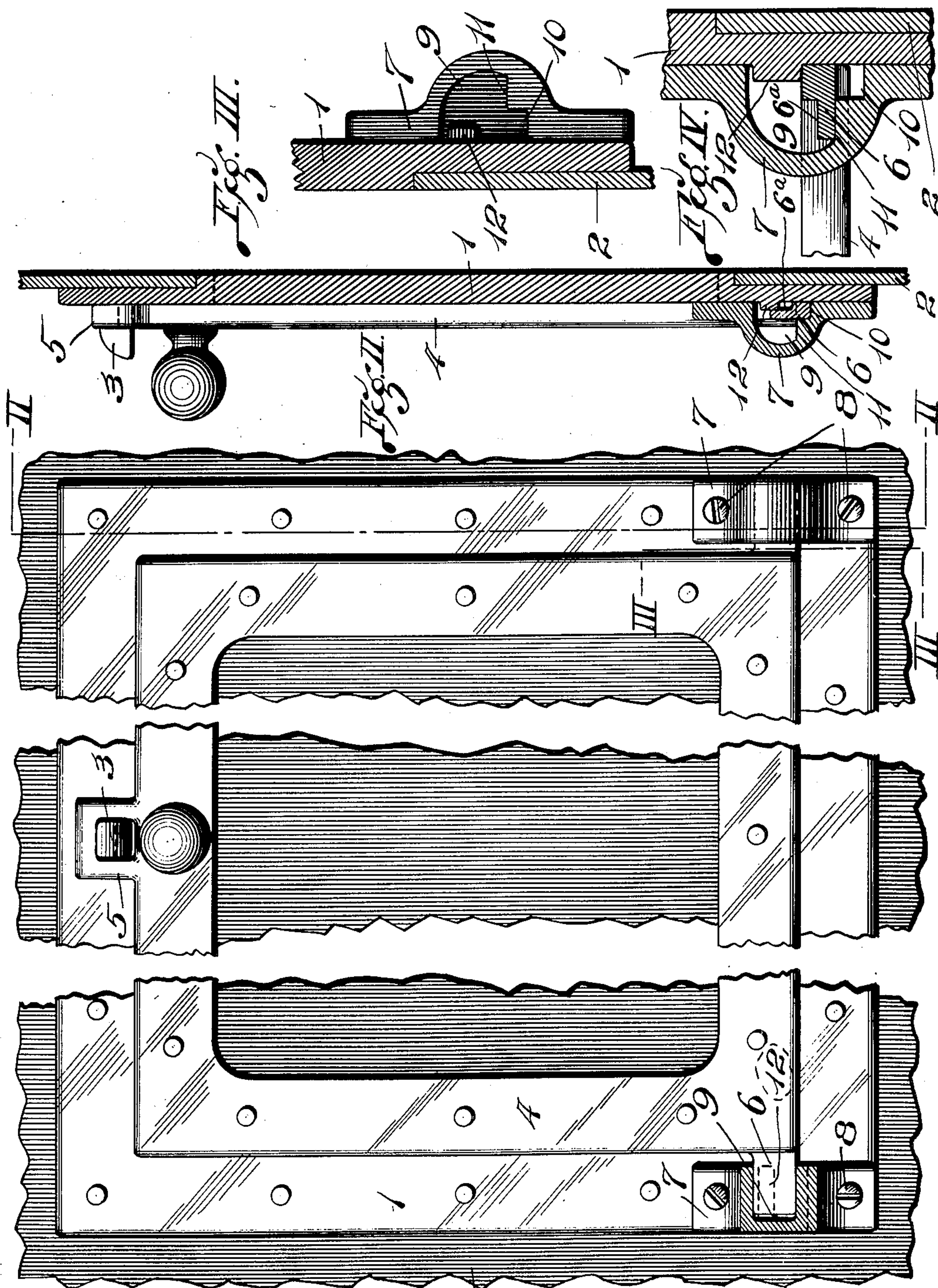
F. R. HENRY.

DROP DOOR.

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934,726.

Patented Sept. 21, 1909.



ATTEST.

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Fig. I.

INVENTOR

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DROP-DOOR.

934,726.

Specification of Letters Patent. Patented Sept. 21, 1909.

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To all whom it may concern:

Be it known that I, FRANK R. HENRY, a citizen of the United States of America, residing at the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Drop-Doors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that description of doors commonly used upon ranges and stoves and it has for its object a construction of hinge whereby the doors may be limited in their downward movements and maintained in a horizontal position after they have been opened.

Figure I is in part a front elevation partly broken out of my door, with one of the hinge boxes shown in vertical section. Fig. II is a vertical section taken on line II—II, Fig. I. Fig. III is an enlarged vertical section taken on line III—III, Fig. I, the door being omitted and showing one of the hinge boxes in elevation. Fig. IV is an enlarged vertical section taken through the door frame and one of the hinge boxes on the line II—II, with a fragment of the door and one of its pintles in a position assumed when the door is lowered.

In the accompanying drawings:—1 designates a rectangular door frame secured in any suitable manner to the wall 2 having a doorway that is to be controlled by my door. The frame is provided at its upper end with an outwardly projecting catch arm 3, preferably containing a slot extending downwardly from its top surface, the catch arm being of a form commonly used in connection with drop doors upon stoves and ranges.

4 designates the drop door provided at its upper end with a loop 5 adapted to be placed in engagement with the catch arm 3. At the lower corners of the door are pintles 6 extending laterally from the sides of the door. These pintles are of L-shape, being thicker at their lower portions than at their upper portions, as seen in Figs. II and IV.

7 designates hinge boxes secured by suitable means, such as screws 8, to the door frame 1. The outer sides of these hinge

boxes are closed, and pockets 9 extend from the closed sides of the boxes to their inner sides. At the rear of each box and at the bottom of the pocket therein is a recess 10, and in front of said recess at the bottom of the pocket, is a horizontal ledge 11.

12 designates stop lugs projecting from the front face of the door frame 1 and which are present within the pockets 9 in the hinge boxes above the recesses 10 in said boxes.

When the drop door is in an upright and closed position, the thickened lower portions of the hinge pintles 6 occupy the recesses 10 in the hinge boxes and by fitting snugly in these recesses act to hold the inner face of the drop door snugly against the door frame so that a close joint is maintained between such parts, the stop lugs 12 being received by the recesses 6^a of the hinge pintles. Then when the door is to be opened, it is elevated to a sufficient degree to withdraw the pintles from the recesses 10, whereupon the door may be lowered to a horizontal position and as it reaches such horizontal position, the rear faces of the thickened lower portions move to horizontal positions beneath the stop lugs 12, while the outer faces of the upper portions of the pintles move into positions upon the ledges 11 of the hinge boxes. The pintles are, therefore, confined from further downward movement, as illustrated in Fig. IV, due to the upper bearings therefor furnished by the stop lugs 12 and the lower bearings furnished by the ledges 11.

I claim:—

The combination of a door frame having a door opening and stop lugs projecting from the face of the door frame, hinge boxes secured to the door frame in front of the stop lugs each hinge box being formed with a pocket, a recess at the bottom of the pocket and a horizontal ledge in front of the recess, and a drop door having pintles fitting in the recesses of the hinge boxes, and formed with recesses which receive the stop lugs.

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In the presence of—

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