

(No Model.)

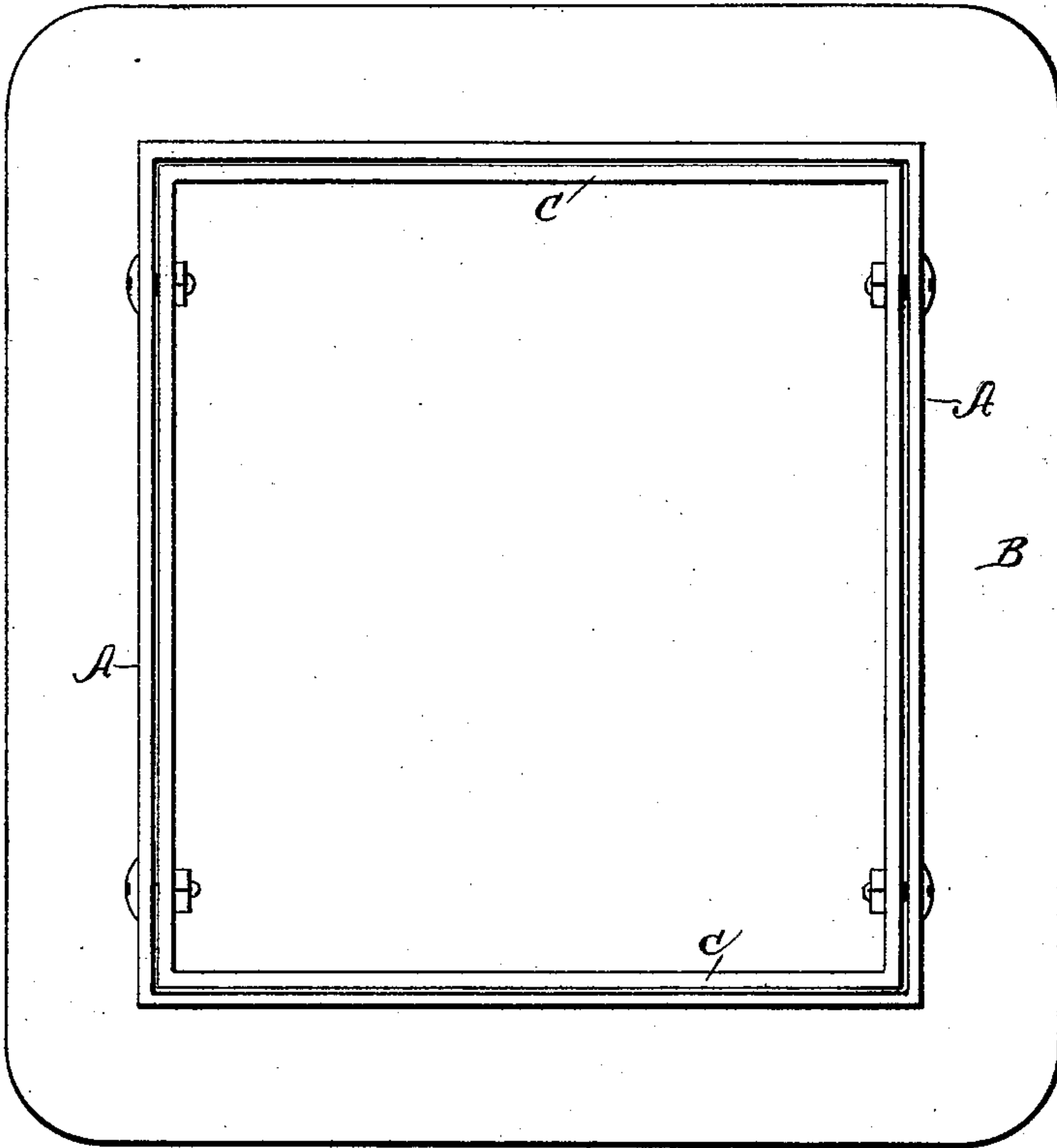
D. M. KNOWLES.

Door Frame for Stoves and Furnaces.

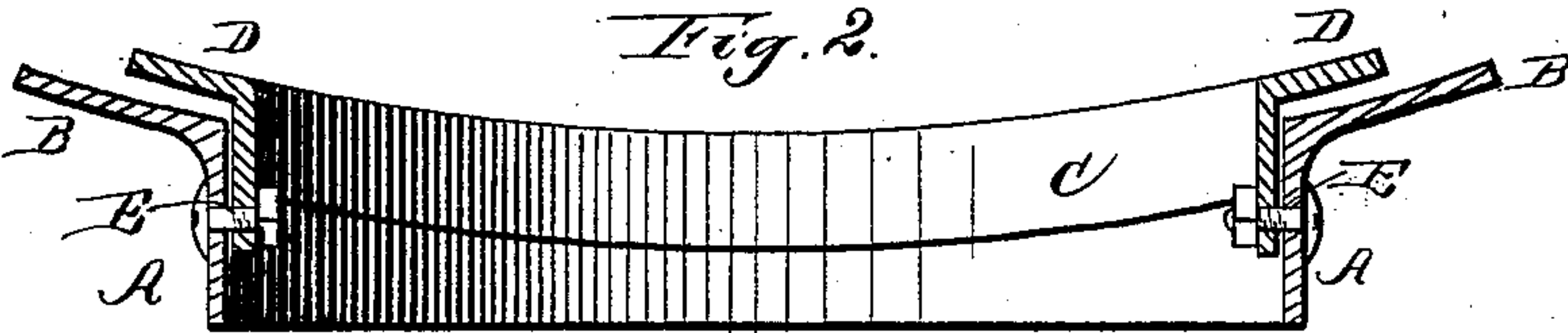
No. 243,581.

Patented June 28, 1881.

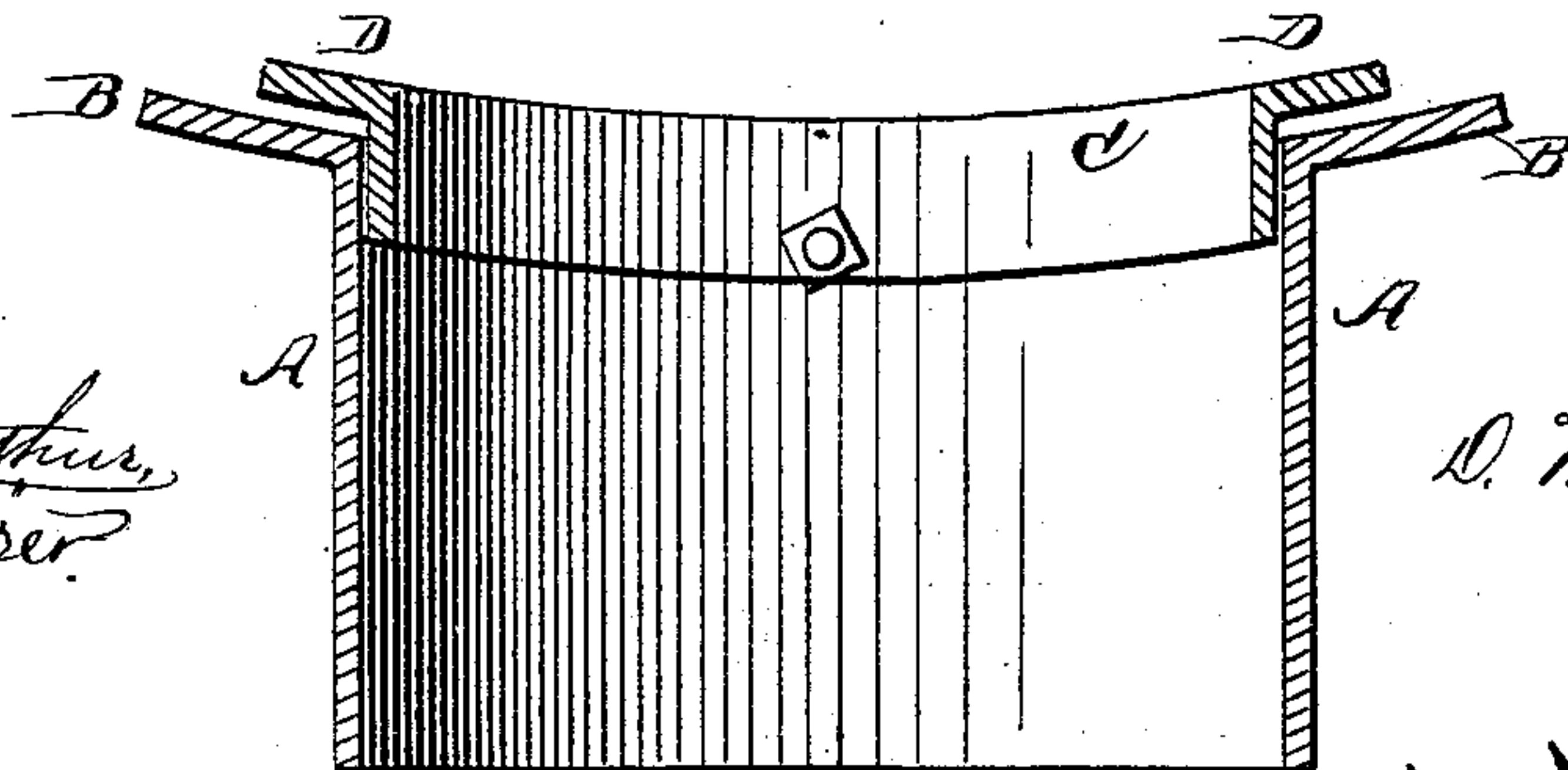
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
W. C. McArthur,  
Jerry Visser.

Inventor:  
D. M. Knowles

Per W. Alexander  
Attorney.

# UNITED STATES PATENT OFFICE.

DANIEL M. KNOWLES, OF NEW BEDFORD, MASSACHUSETTS, ASSIGNOR TO  
HIMSELF AND HORATIO G. DEAN, OF SAME PLACE.

## DOOR-FRAME FOR STOVES AND FURNACES.

SPECIFICATION forming part of Letters Patent No. 243,581, dated June 28, 1881.

Application filed March 29, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL M. KNOWLES, of New Bedford, in the county of Bristol and State of Massachusetts, have invented certain  
5 new and useful Improvements in Door-Frames and Necks for Stoves and Furnaces; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being  
10 had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in that class of door-frames and necks for sheet-iron stoves which are constructed in  
15 two parts, one adapted to set against the inside and the other against the outside of the stove, and clamp the walls between, so as to be held in place without weakening the walls of the stove with rivets for securing the frames.  
20 While the rivets heretofore employed for securing the ordinary frames are rendered unnecessary, it has been found that the metal of the stove is apt to part at the outer edges of the flanges which clamp it during the ordinary  
25 handling of the stove in putting it up, taking it down, and moving it from place to place. The object of my invention is to obviate this objection and render the pipe stronger at the  
30 joint of the frame or neck than heretofore; and this I accomplish by making the flange of the outer frame considerably larger than that of the inner frame, so as to extend the metal of the outer flange beyond the edge of the inner  
35 flange, form a secure seat against the outside of the stove, and at the same time permit the walls of the stove to yield under any sudden pressure or blow upon the frame to a sufficient extent to prevent any breakage and spring the  
40 frame back to its normal position afterward, as more fully hereinafter specified.

In the drawings, Figure 1 represents a front view of a door-frame; Fig. 2, a central section of the same, and Fig. 3 a section of a pipe-collar.

45 In the drawings, the letter A indicates the door-frame or pipe-collar of a stove or furnace, of suitable size and shape to fit the intended opening in the stove or furnace. The said door-frame or collar is provided with flange B at its

base, which sits against the outer wall of the  
stove or furnace when said collar is in place. 50

The letter C indicates a frame adapted to fit within the door-frame or pipe-collar, the said frame corresponding in general configuration to the configuration of the door-frame or collar. The said frame C is provided with flange  
55 D, which sits against the inner wall of the stove or furnace when in place.

The flange B is made considerable larger than the flange D, so as to overlap it and protect the shell of the stove at the outer edge of  
60 flange D, and to some extent beyond it, as indicated in the drawings, and prevent breakage in the event of side pressure or sudden blows against the outside of the frame or door. 65

The door-frame or collar is provided with apertures E, and the inner frame, C, with similar apertures, whereby the two may be secured together by means of suitable bolts.

In applying my improved frame or collar the  
said door-frame or collar, as the case may be, 70 is applied over the opening in the stove or furnace, on the outside, with the flange resting against the outer wall. The inner frame is then inserted in the opening from the inside,  
75 and into the door-frame or collar, and the two are securely fastened together by means of the bolts, clamping the edges of the opening between the flanges, and firmly fastening the  
80 door-frame or collar in place.

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

The combination, with the walls of a stove, of the inner and outer frames and their clamping  
85 devices, the said frames being flanged at their bases, the flange on the outer frame extending beyond the flange on the inner so as to overlap it, substantially as and for the purposes specified. 90

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

DANIEL M. KNOWLES.

Witnesses:

J. C. KNOWLES,  
WM. W. HATHAWAY.