(No Model.) 2 Sheets—Sheet 1.

A. A. KNIGHTS.

DAMPER FOR OVENS.

No. 592,789. Patented Nov. 2, 1897.

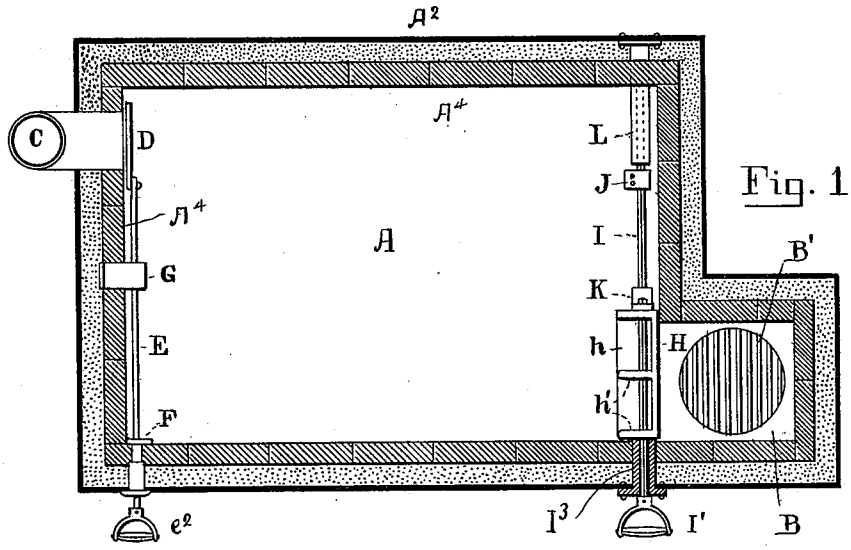

Fig. 1.

Witnesses,
F. E. Galler
Mary A. Upham

Inventor,
Alonzo A. Knights,
By A. B. Upham,
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

A. A. KNIGHTS.

DAMPER FOR OVENS.

No. 592,789. Patented Nov. 2, 1897

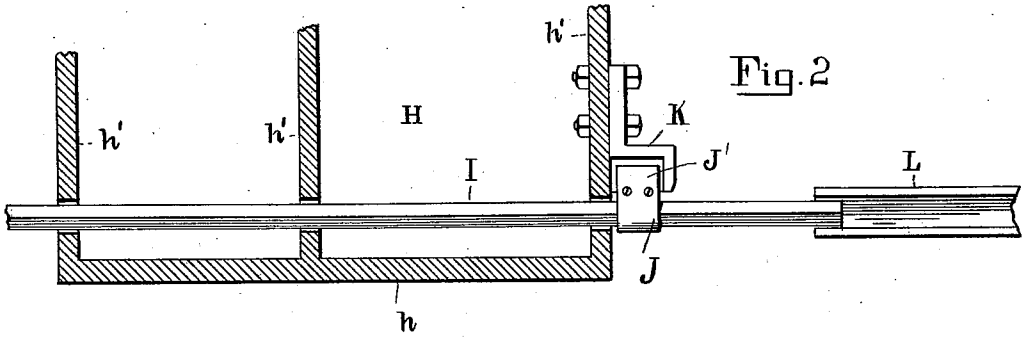

Fig. 2.

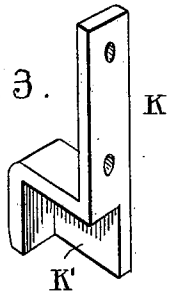

Fig. 3.

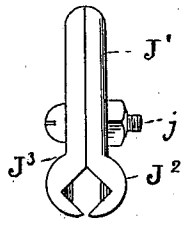

Fig. 4.

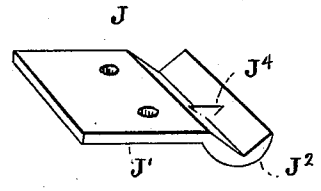

Fig. 5.

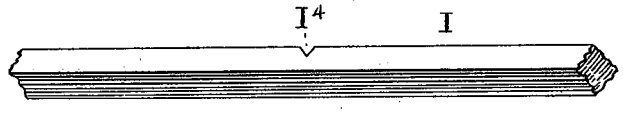

Fig. 6.

Witnesses;
F. E. Lallier
Mary A. Upham

Inventor,
Alonzo A. Knights;
By A. B. Upham
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALONZO A. KNIGHTS, OF MELROSE, MASSACHUSETTS.

DAMPER FOR OVENS.

SPECIFICATION forming part of Letters Patent No. 592,789, dated November 2, 1897.

Application filed April 16, 1897. Serial No. 632,422. (No model.)

To all whom it may concern:

Be it known that I, ALONZO A. KNIGHTS, a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented a new and useful Damper for Ovens, of which the following is a full, clear, and exact description.

The object of this invention is the effecting of certain improvements in portable ovens for bakers, as hereinafter set forth, and illustrated in the drawings forming part of this specification, in which—

Figure 1 is a sectional plan view of my oven, and Fig. 2 is a longitudinal section of the damper. Fig. 3 is a perspective view of the damper-catch. Fig. 4 is a perspective view of the damper-rod finger. Fig. 5 is a view of the duplicate parts combined to form the same, and Fig. 6 is a view of a portion of the damper-rod.

Referring to Fig. 1, A indicates the oven-chamber. B is the fire-box, and B′ the grate for heating the oven, and C is the exit-flue therefor. The damper D for closing this exit-flue is operated by the rod E, passing through the front wall of the oven and terminating in the handle e^2.

My improvements relate to the damper for regulating the admission of heat to the oven. Said damper H, made of cast-iron, is formed with the base-plate *h* and ribs *h′*, and it is manipulated by means of the rod I, having handle I′. When the damper is closed, this handle projects some little distance from the oven-front, and consequently is in the way of the baker. This objection is overcome in my oven by the following construction: As will be seen by reference to Fig. 1, this damper-rod I passes freely through the ribs *h′* of the damper and is provided with a collar J, rigidly secured thereto. When the rod is drawn forward, this collar contacts with the damper and moves the same to the degree of closure desired. The rod can now be pushed back until the handle touches the oven, but the damper remains where placed. To enable the rearward push to open the damper when so wished, I elongate said collar J into a finger J′, as shown more clearly in Fig. 4, and attach to the end of the damper a catch K, with which said finger can be engaged by simply turning the rod I. Said catch is formed as shown in Figs. 2 and 3 and is bolted to the end of the damper. The collar J is secured to the rod I by being formed in two parts J^2 J^3, fastened together by the bolt *j* and having small ribs J^4, adapted to engage the notches I^4, made in the rod I. Said ribs and notches serve to prevent the collar from sliding along the rod I when the damper is being moved.

As is shown in Fig. 2, the finger J′ is engaged with or disengaged from the catch K, and hence the damper, by simply turning the rod I, said catch being provided with the side wall K′ in order to limit the movement of the finger when being brought into engagement with the said catch. By this construction the damper-rod can draw the damper forward and then be pushed back out of the way, and can then be again brought forward, by a simple turn engaged with the damper, and the latter moved back to the point desired. To prevent a loaf of bread being impaled between the end of this damper-rod and the rear wall of the oven, I prolong said rod and furnish a tube L, secured to the rear wall, into which said prolonged end telescopes. This tube is flanged and said flange bolted to the casing A^2. Another important object of this tube is to serve as a guide for the damper H, for without it the damper will be crowded away from the fire-pot by the coal and ashes.

For the forward end of the damper-rod I is supplied a heavy cast-iron tube I^3, formed as a part of or bolted to the framing or casing of the oven. The inner end of this tube projects sufficiently beyond the tiling A^4 to serve as a buffer for the damper H, whereby the latter is prevented from striking the fragile tiling and breaking the same when drawn forward.

What I claim as my invention, and desire to secure by Letters Patent, is as follows, to wit:

1. In an oven, the combination of the horizontally-reciprocative damper comprising the vertical plate having the base-plate and the ribs joining the same, a hole being formed in said ribs in the direction of the damper's movement, and a damper-rod easily movable in said hole and having a finger projecting therefrom at right angles thereto, said damper being adapted to be engaged by said finger by a partial turn of said rod, and then by a sub-

sequent longitudinal force applied to said rod, the damper moved or closed as desired.

2. In an oven, the combination with the sliding damper having the longitudinal hole through the same, of the damper-rod passing freely through said hole, the collar fixed upon said rod and having finger, J', and the catch, K, secured to said damper and adapted to be engaged by said finger, substantially as and for the purpose set forth.

3. In an oven, the combination of the sliding damper and the damper-rod passing freely through the same, the catch, K, having side wall, K', secured to said damper, and the collar, J, having finger, J', fixed upon said rod, substantially as and for the purpose set forth.

In testimony that I claim the foregoing invention I have hereunto set my hand and seal this 10th day of April, in the year 1897.

ALONZO A. KNIGHTS. [L. S.]

Witnesses:
A. B. UPHAM,
C. G. DAY.