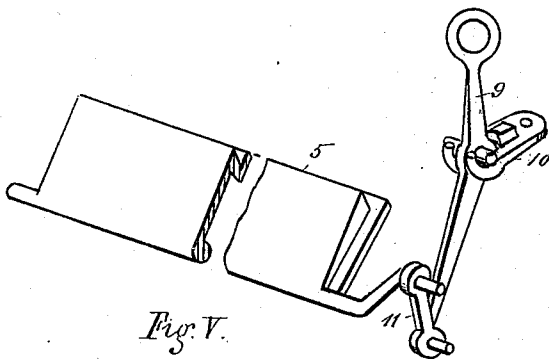
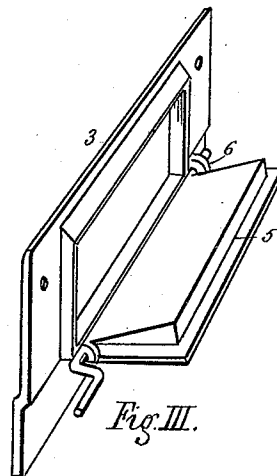
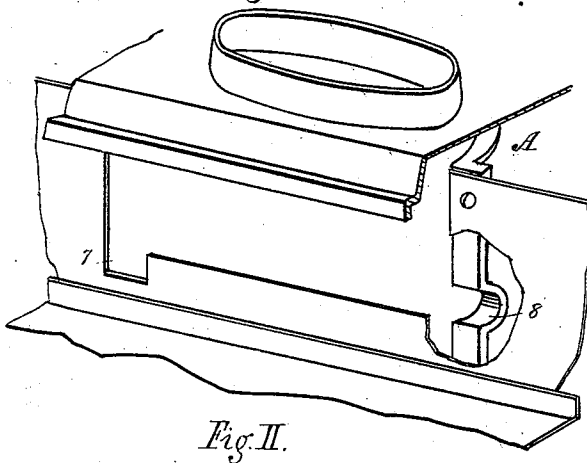
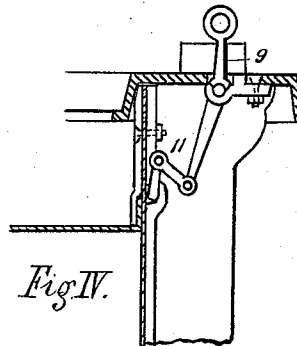
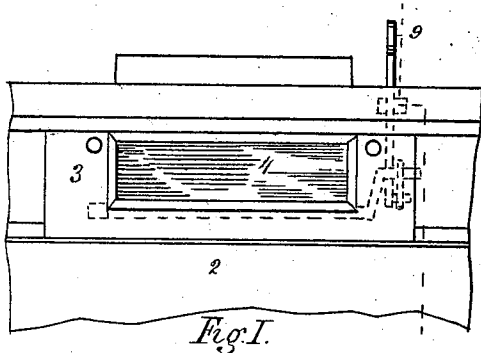


(No Model.)

F. V. KNAUSS.
DAMPER FOR COOKING STOVES OR RANGES.

No. 529,622.

Patented Nov. 20, 1894.



WITNESSES:

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INVENTOR.

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UNITED STATES PATENT OFFICE.

FRANK V. KNAUSS, OF PORTSMOUTH, OHIO.

DAMPER FOR COOKING STOVES OR RANGES.

SPECIFICATION forming part of Letters Patent No. 529,622, dated November 20, 1894.

Application filed February 23, 1894. Serial No. 501,241. (No model.)

To all whom it may concern:

Be it known that I, FRANK V. KNAUSS, a citizen of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented a new and useful Improvement in Dampers for Cooking Stoves or Ranges, which improvement is fully set forth in the following specification and accompanying drawings, in which—

- 10 Figure I is a front view of the smoke box of a stove or range showing the removable plate having an opening to receive the damper valve; Fig. II, a perspective view of the same, the damper plate being removed showing the
15 upper extension of the rear wall of the oven partly broken away to show the bearing of one of the trunnions of the damper; Fig. III, a detail view of the rear side of the damper plate with the damper attached thereto; Fig.
20 IV, a view of the damper operating lever and its connections; and Fig. V, a detail view of the damper and operating attachment.

My invention relates to improvements in the construction and method of operating
25 dampers for cooking stoves or ranges. The superiority of the well known rolling damper is generally conceded but while readily adapted to the stoves which were made in former years, the change of form in cooking
30 stoves and ranges of modern construction demanded a different form of damper. All the known devices employed as substitutes for the old damper have proved defective and inefficient on account of excessive friction warping by heat, and other causes.

35 The object of my invention is to provide a simple and practical device whereby the rolling damper may be easily adapted to, and utilized in stoves and ranges of all forms and
40 dimensions.

Referring to the accompanying drawings, A designates the smoke-box of a cooking stove or range; 2, the upper extension of the rear wall of the oven having an opening which is
45 normally closed by the cast metal plate 3 provided with a rectangular opening 4 to receive the damper valve 5. On the inner side of this plate adjoining one of the lower corners of the opening is an integral lug 6 having an
50 aperture which forms a bearing for the inner trunnion of the damper. The rear plate of the oven has a notch 7 to admit the lug. The

plate 3 is removable in order to provide easy access to the damper so that it may be taken out and replaced when desired without removing top or other parts of range. The outer
55 trunnion of the damper rotates freely in a bearing 8 formed in the outer wall of the smoke box. The top plate of the stove is slotted to admit a lever 9 which swings on a
60 bifurcated bearing 10 attached to the under side of the top plate. The lower end of said lever engages a link 11 by which connection is made with the cranked end of the damper
65 trunnion.

The damper valve is formed with a depression on the rear side and a corresponding projection in front. (See Fig. V.) An overbalance is thus produced and the damper kept in
70 closed position by the force of gravity.

It will be understood that all the bearings of the damper and its operating attachment are preferably on the outside of smoke box or flues and are designed to have free movement in order that their action shall not become
75 clogged by expansion or other results of the heat to which they are exposed. It will also be observed that the top of the operating lever being clearly visible at any distance and from all directions, will always indicate
80 the actual position of the damper. If it be inclined to the rear it will show that the damper is closed and the reverse position if inclined to the front.

What I claim as new is—

85 In a cooking stove, the combination with the removable plate provided with a rectangular opening and formed with an apertured lug, and the rear plate of the oven formed with a notch to receive said lug, of the damper formed with a counterbalancing recessed
90 portion, and having a trunnion at one end journaled in said lug, a trunnion at the other end journaled in a bearing formed in the outer wall of the smoke box, and the crank
95 and connections for operating the damper, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand.

FRANK V. KNAUSS.

Witnesses:

W. S. TODD,

IDA Q. MERCER.