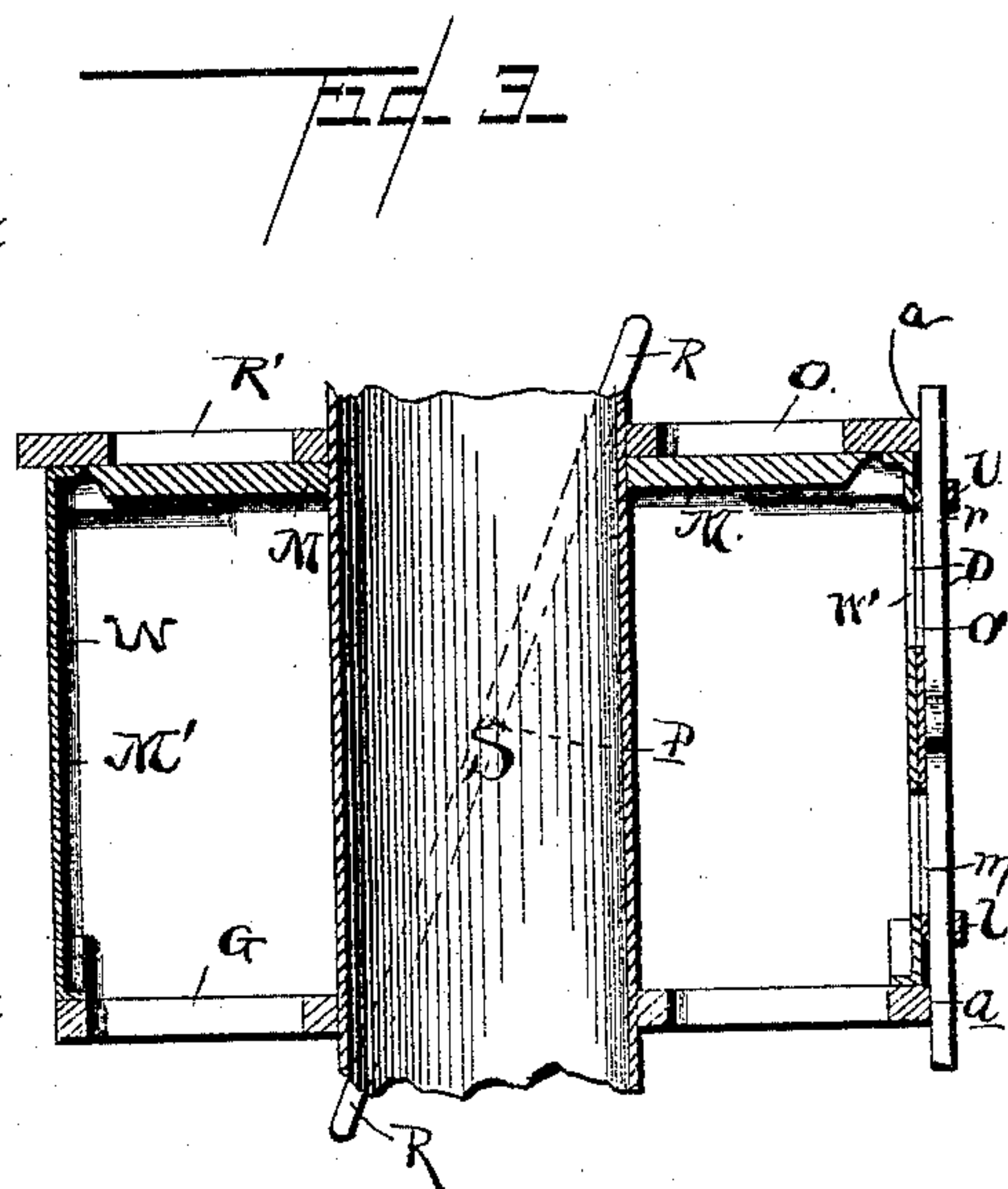
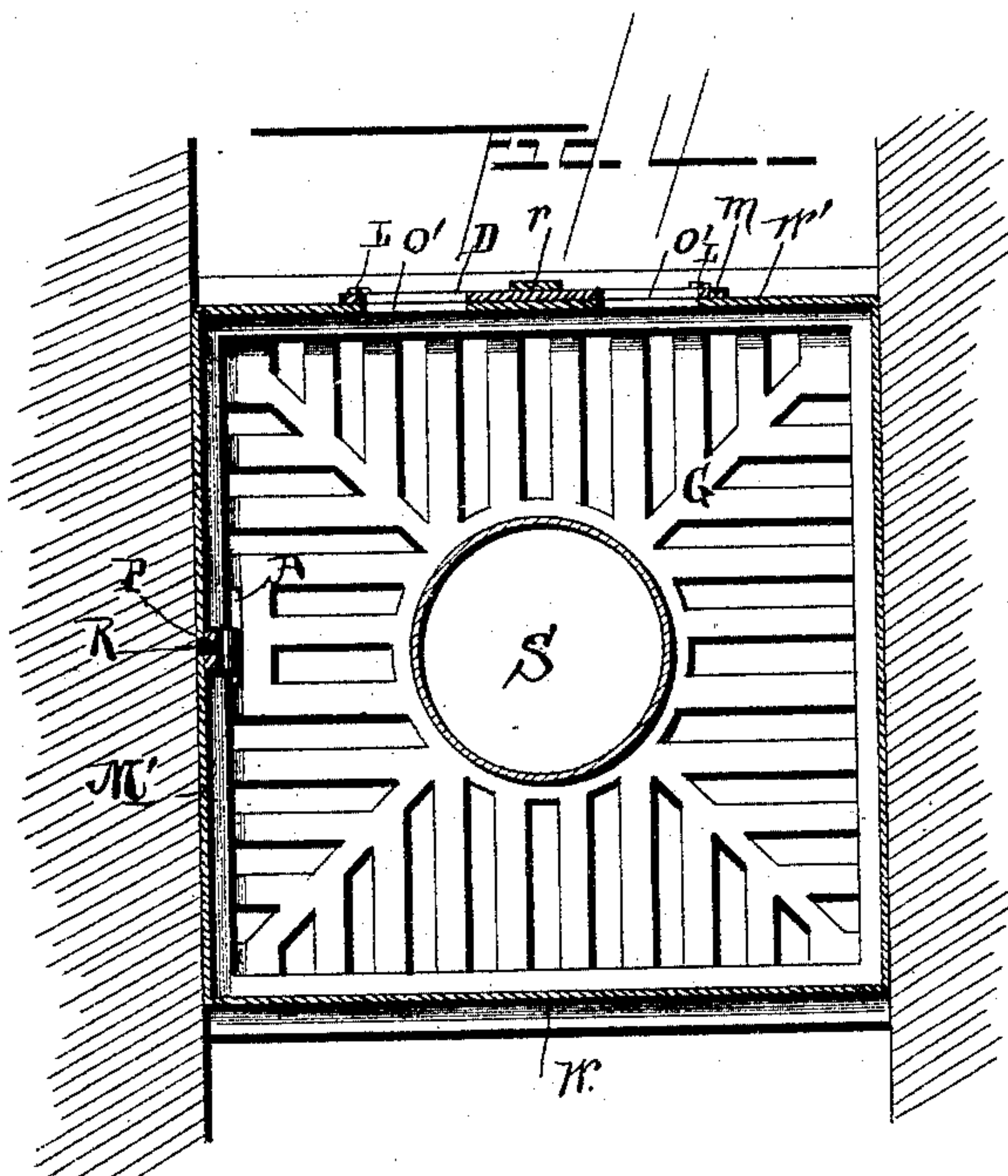
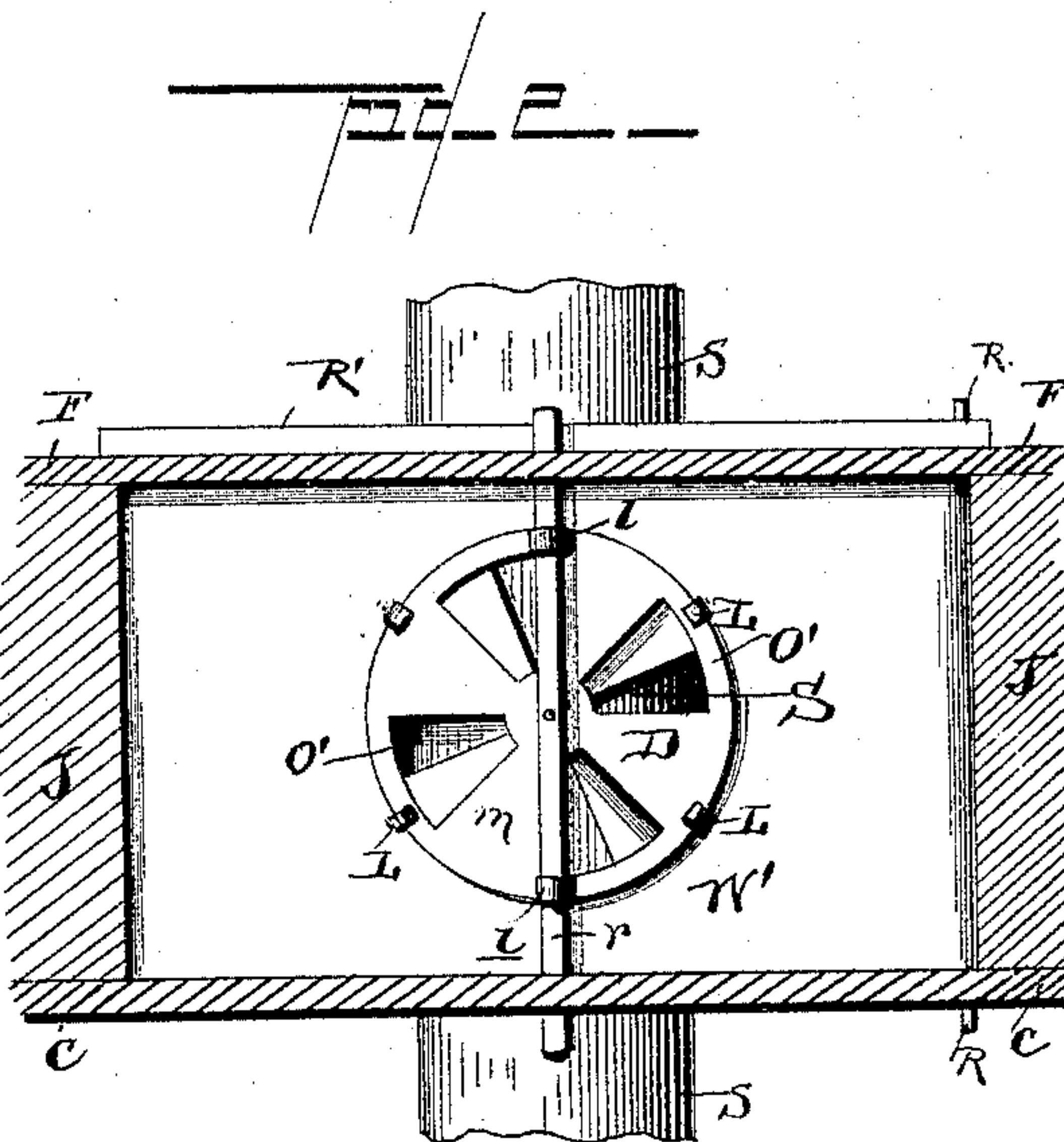
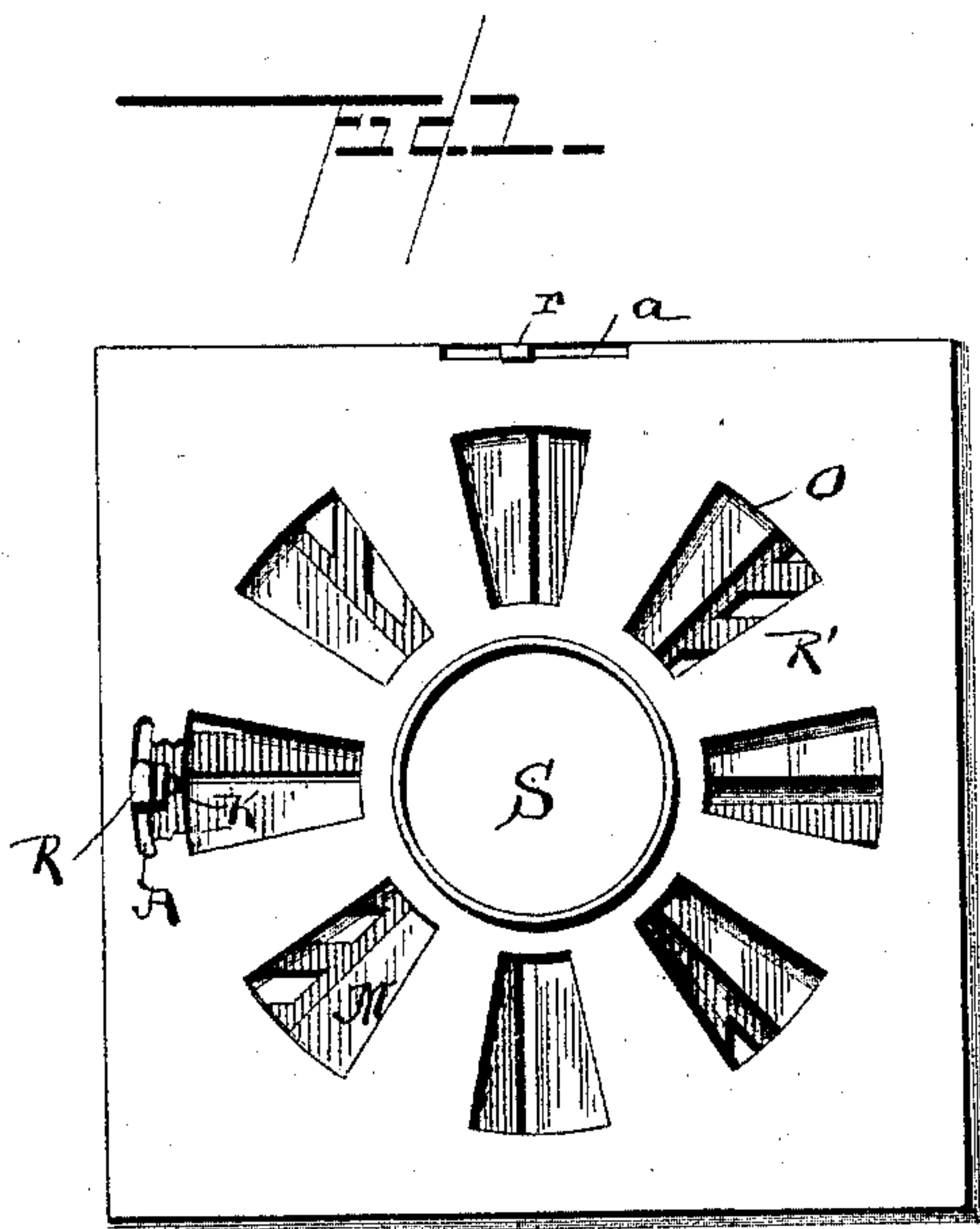


(No Model.)

T. C. HOWE.
REGISTER.

No. 473,751.

Patented Apr. 26, 1892.



Witnesses

J. G. Seitz

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THEODORE C. HOWE, OF GENESEE FORK, PENNSYLVANIA.

REGISTER.

SPECIFICATION forming part of Letters Patent No. 473,751, dated April 26, 1892.

Application filed July 14, 1891. Serial No. 399,500. (No model.)

To all whom it may concern:

Be it known that I, THEODORE C. HOWE, a citizen of the United States, residing at Genesee Fork, in the county of Potter and State of Pennsylvania, have invented a new and useful Register, of which the following is a specification.

This invention relates to stoves and furnaces, and more especially to the registers used in connection therewith; and the object of the same is to produce certain improvements in devices of this character.

To this end the invention consists in the details of construction hereinafter more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a plan view of this improved register partly closed. Fig. 2 is a section across two of the joists and the flooring and the ceiling of the room below, showing the damper therein as partly closed. Fig. 3 is a central longitudinal section of the entire device. Fig. 4 is a horizontal section through the center of the joists.

Referring to the said drawings, the letters J J designate the joists upon which is mounted the flooring F, and to the lower edges of which is secured the ceiling C of the room below.

S is an ordinary stovepipe passing vertically through the ceiling and flooring midway between the joists, and the products of combustion from a stove or other source of heat are directed into the lower end of this pipe and are led from the upper end to a suitable exit, as will be clear.

R' is a register let into the flooring between the joists and surrounding the stovepipe S, and G is a grating let into the ceiling immediately below the register, as seen in Fig. 3, and also surrounding the pipe S. The register and grating are connected by a metallic casing M', so that they may be withdrawn together from position. The register comprises a stationary upper member provided with the usual openings O, and a movable lower member M, oscillating around the stovepipe and provided with openings adapted to register with those in the stationary member when the movable member is properly turned. To effect this movement a rod R is pivoted at P to the casing M' and is pivotally connected at K to the movable member, its extremities mov-

ing in slots A in the register and in the grating and projecting slightly beyond the same in order that they may be operated by hand. The products of combustion at all times pass through the pipe S, and the heated air around the pipe in the room below passes through the grating at all times but can only pass into the room above when the register R' is opened.

The letter W designates the end wall of the casing M' between the floor and ceiling and between the joists beneath one edge of the register, so that what heat passes through the grating will have no exit in that direction. Beneath the other edge of the register in the other end wall W', I locate a damper D, whose movable member *m* turns beneath lips L on the stationary member, the latter in this case being the wall W', and the two members having openings O' similar to those in the register. Secured across the center of the movable member *m* is a rod *r*, embraced by lips or tongues *l* on said movable member, and the extremities of this rod project through slots *a* in the edge of the register and the grating at right angles to the slots A. When the register R' is closed and the heat passes through the grating G into the space below the register, the wall W prevents its escape in one direction, but the damper D may be opened to permit it to pass in the other direction through the flue formed by the two joists, the floor, and the ceiling. This flue may communicate with the chimney or with any suitable exit.

It will thus be seen that an operator in either the upper or lower room may open or close the register and the damper. When both are open, a portion of the heat in the room below passes into the room above. When the damper is closed and the register open, all the heat that passes through the grating passes also through the register, and when the latter is closed and the damper is open all the heat passes into the flue, while when both are closed there is no result other than would be produced by a solid ceiling.

If desired, various minor changes may be made without departing from the spirit of my invention.

The grating and register and possibly the damper are preferably of cast-iron, although the materials, size, shape, and proportions of parts are not essential.

What is claimed as new is—

1. A register-box adapted to be located between a ceiling and floor and provided with a side opening and means for opening and
5 closing the same, substantially as specified.

2. A register-box adapted to be located between a ceiling and floor, said box having its side wall provided with openings, a damper
10 adapted to cover or uncover the openings, and an operating-rod connected to the damper and having its ends extending through the upper and lower sides of the box, substantially as specified.

3. In a device of the character described,
15 the combination, with a wall provided with openings radial to a common center and inwardly-bent lips concentric thereto, of a damper pivoted at said center and having registering openings, the periphery of said
20 damper engaging beneath said lips, an operating-handle for the damper, and a flue leading from the openings, substantially as described.

4. In a device of the character described,
25 the combination, with a wall provided with openings radial to a common center and in-

wardly-bent lips concentric thereto, of a circular damper pivoted at said center and having registering openings, the periphery of said damper engaging beneath said lips, tongues
30 on the damper, and an operating-rod across the latter and secured beneath said tongues, substantially as described.

5. In a device of the character described, the combination, with a vertical wall located
35 in a horizontal flue within a flooring, said wall having openings radial to a common center, of a circular damper pivoted at said center and having registering openings, tongues on
40 said damper, and an operating-rod secured across the damper beneath said tongues with its extremities projecting through the slots in the ceiling and floor, as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as
45 my own I have hereto affixed my signature in presence of two witnesses.

THEODORE C. HOWE.

Witnesses:

O. A. NELSON,
JOHN F. STONE.