

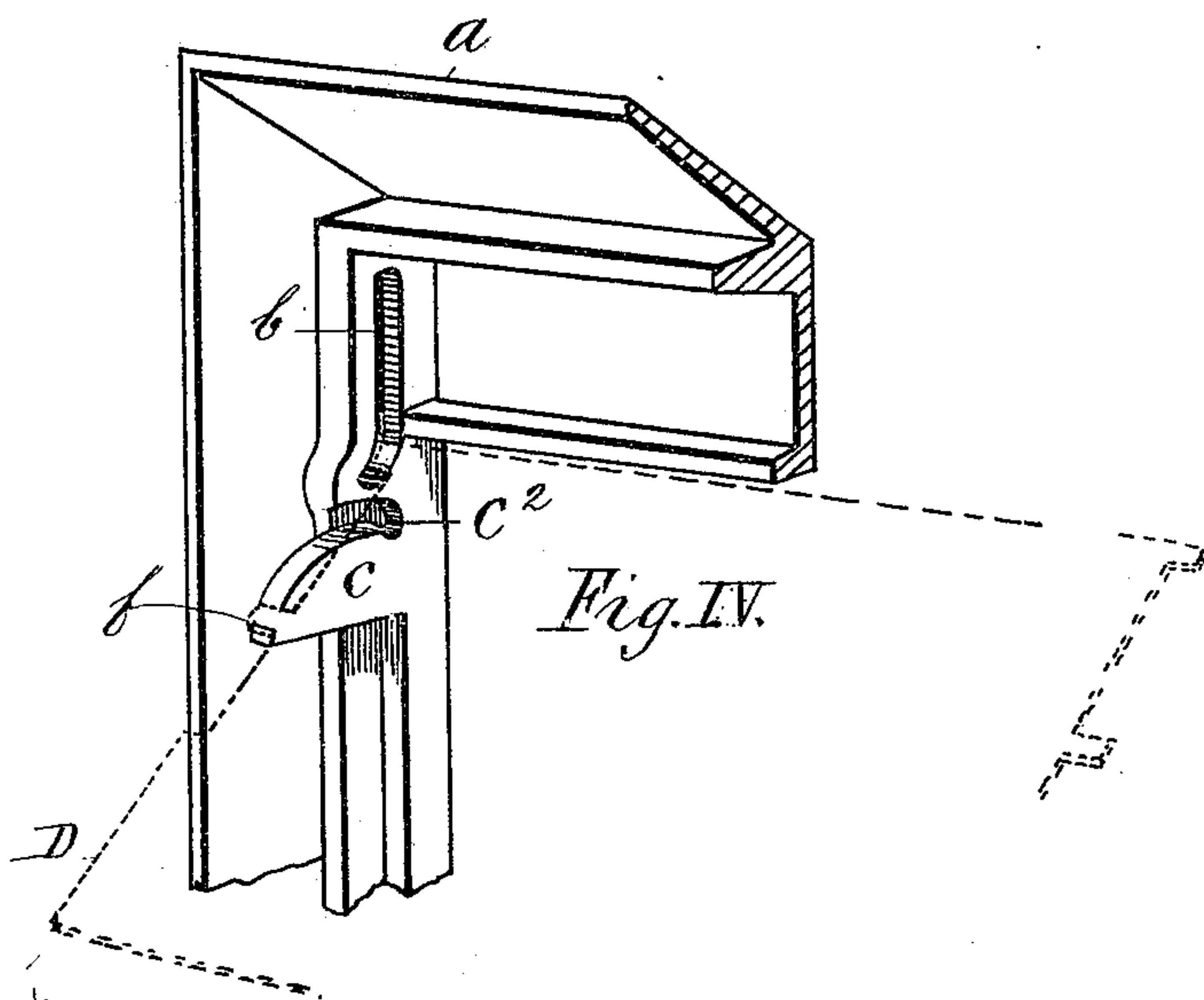
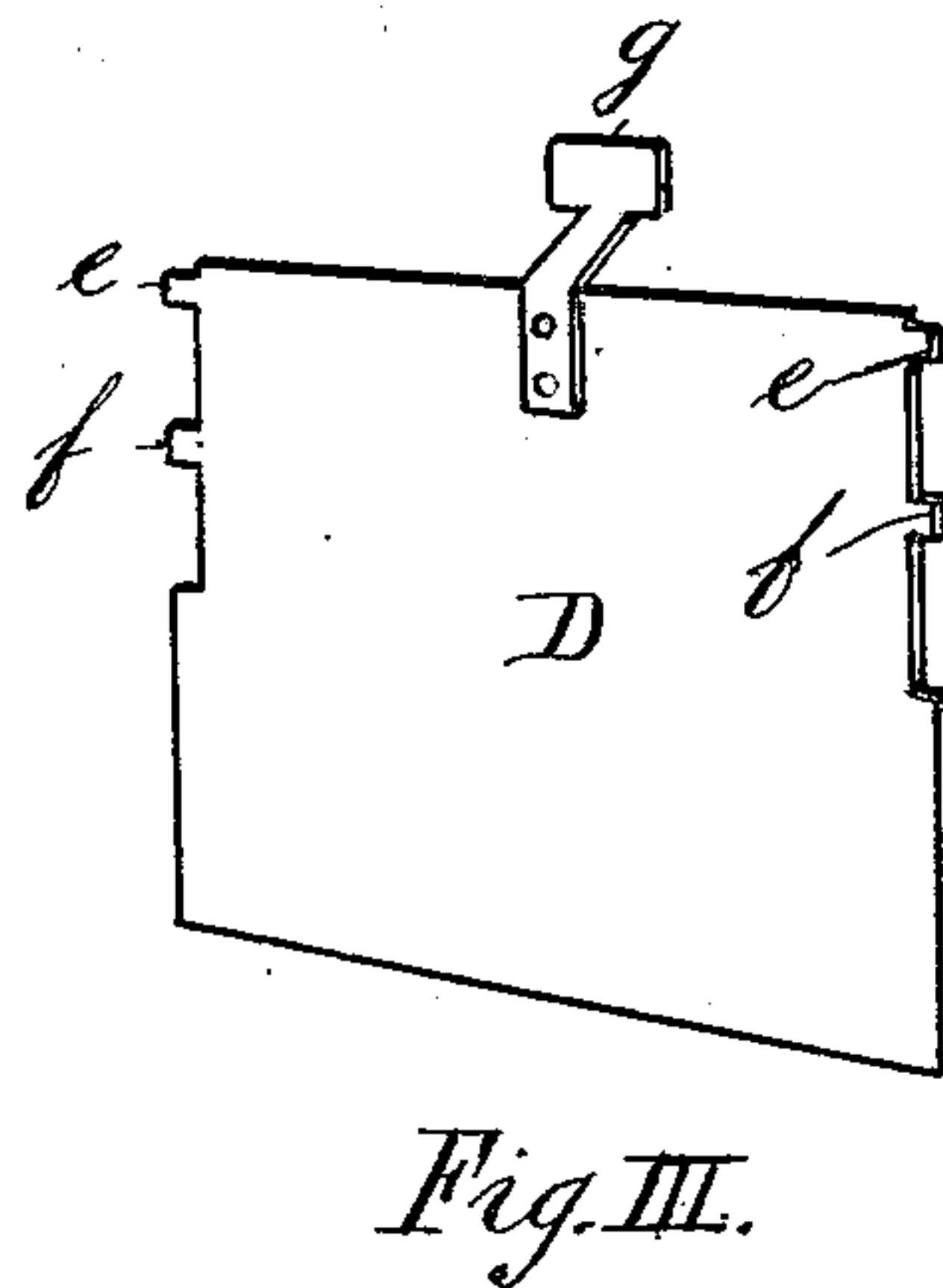
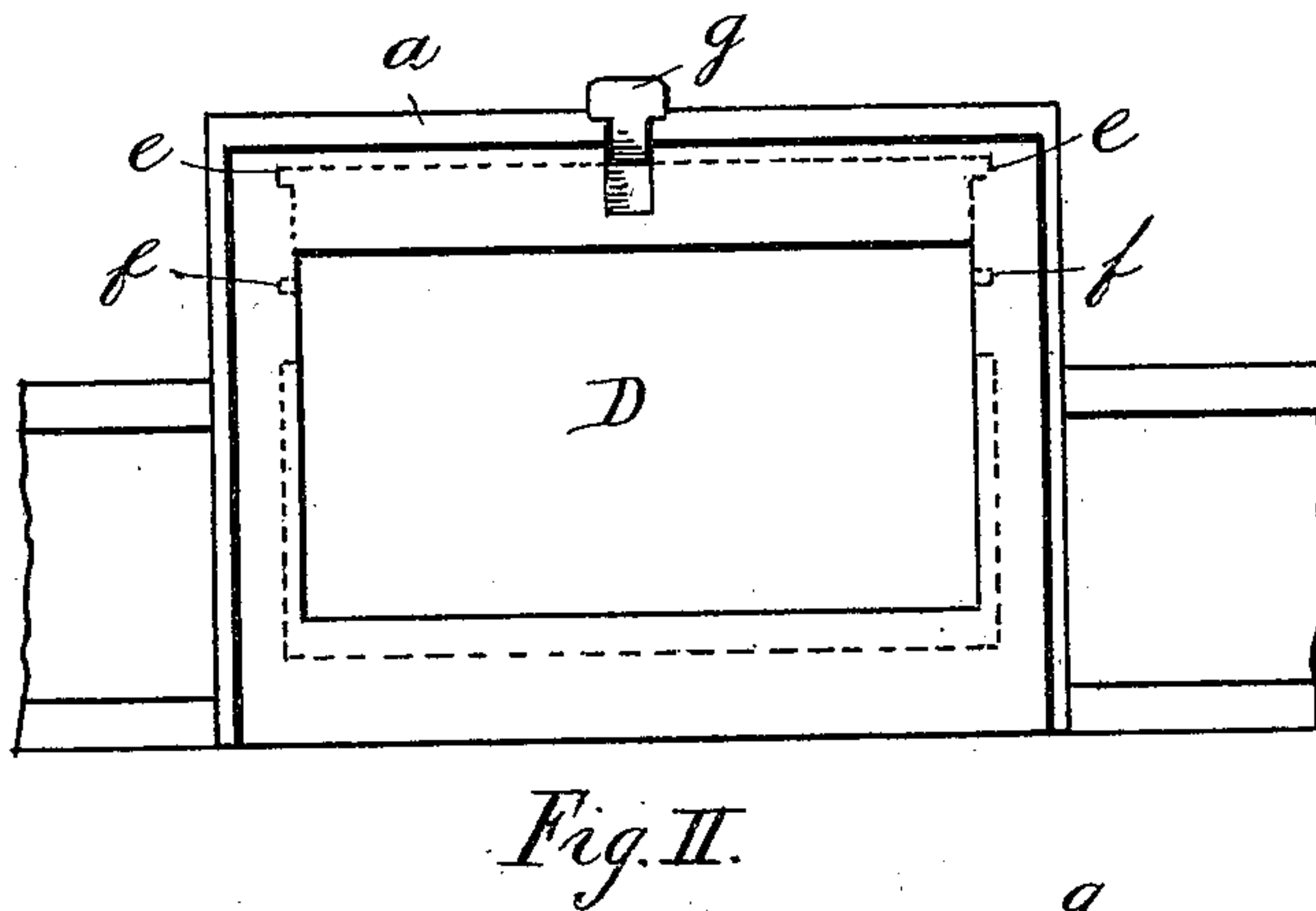
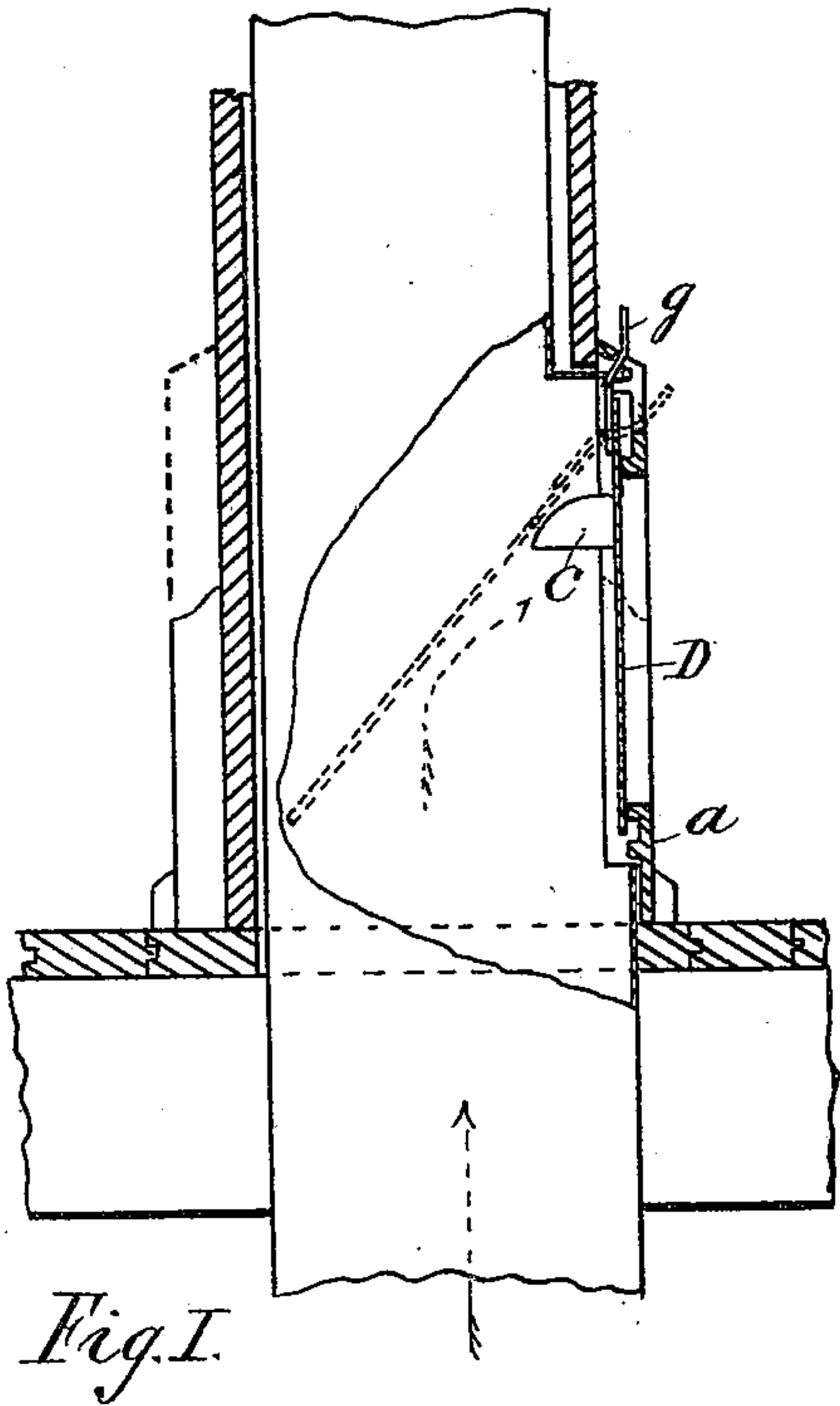
No. 641,688.

Patented Jan. 23, 1900.

C. E. FRICK.
HOT AIR REGISTER.

(Application filed Feb. 17, 1899.)

(No Model.)



Witnesses,
R. S. Millar
L. M. Adams.

Inventor,
Chas. E. Frick
By J. Bailey

UNITED STATES PATENT OFFICE.

CHARLES E. FRICK, OF NORWOOD, OHIO.

HOT-AIR REGISTER.

SPECIFICATION forming part of Letters Patent No. 641,688, dated January 23, 1900.

Application filed February 17, 1899. Serial No. 705,920. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. FRICK, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Hot-Air Registers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a central vertical section of my improved hot-air register; Fig. 2, an exterior front face view; Fig. 3, a perspective view of the valve-plate, and Fig. 4 a perspective detail.

The object of my invention is to provide a superior hot-air register in which the valve-plate is arranged to depend by gravity from its supports and which will remain at any inclination to which it may be set without any manipulation whatever other than that of shifting it to the desired slant. The register is of the class adapted for partitions or side walls, and may be used in the wall of any apartment, upstairs or down.

The prime feature of my invention consists in the arrangement within the register-frame of a valve-plate normally pendent in a vertical plane, the upper corners of the plate having lateral projections that engage each in a guide-groove, and some distance below these projections are similar projections which serve in conjunction with the bearings to hang the valve-plate and also to maintain it in any desired position. The hanger projections each rest and move upon an inclined segmental bearing of such contour that when the plate is set to an inclination its dead-weight bearing down the incline will counteract the tendency of the leverage action exerted by the valve-plate, and consequently the latter cannot swing toward a vertically-pendent position unless when manipulated.

Other features of advantage will be set forth in the specification.

Referring to the drawings, *a* represents the frame-casting of the register, formed or provided at its inner sides with substantially vertical guide-recesses *b* (see Fig. 4) and also segmental guides *c*, their functions being hereinafter set forth.

D represents the register-plate, (see Fig. 3,) having projections *e e* and *f f* and an operating-handle *g*.

The register is set in position in the proper air-conduit *H* being established. When the plate is vertically pendent, the register is closed and the guide projections *e e* are near the top of the guide-recess *b*. The bearing projections then rest in the slight detents *c*. (See Fig. 4.) To open the register, the handle *g* is swung outwardly, the bearing projections slipping out of the detents and gliding onward upon the curved inclinations of the guides *c*, the plate sinking slightly and tending toward the horizontal, according to the degree of movement effected. The lower portion of the guide-recess is preferably curved in order to exert a binding resistance when the plate is at its extreme adjustment and exerting greater leverage force.

It will be observed that by reason of the plate sinking somewhat as it swings inwardly its lower edge will be still low enough to cut off a view through the opening in case two registers should be coincidentally placed on opposite sides of a partition.

What I claim as new is—

1. In a wall-register a valve-plate having projections *e e* on its upper corners and similar supplementary projections *f f* on its sides, the latter projections resting upon inclined segmental bearings formed or secured on the inside of the register-opening, the higher projections engaging in guide-grooves above and in suitable relation to the segmental bearings, the said plate being held to any inclination by its projections movable along inclined segmental bearings, substantially as set forth.

2. In a wall-register a register-frame having its interior vertical side portions provided each with a substantially vertical guide-recess and below said recess a rearwardly-projecting segmental bearing whose upper face tends downwardly, serving to sustain the projections of the valve-plate to hold the latter at any desired inclination, substantially as and for the purpose herein specified.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of February, 1899.

CHARLES E. FRICK.

Witnesses:

ROBERT KIRK,
R. S. MILLAR.