

(No Model.)

T. G. WANLESS.
HOT AIR REGISTER.

No. 454,096.

Patented June 16, 1891.

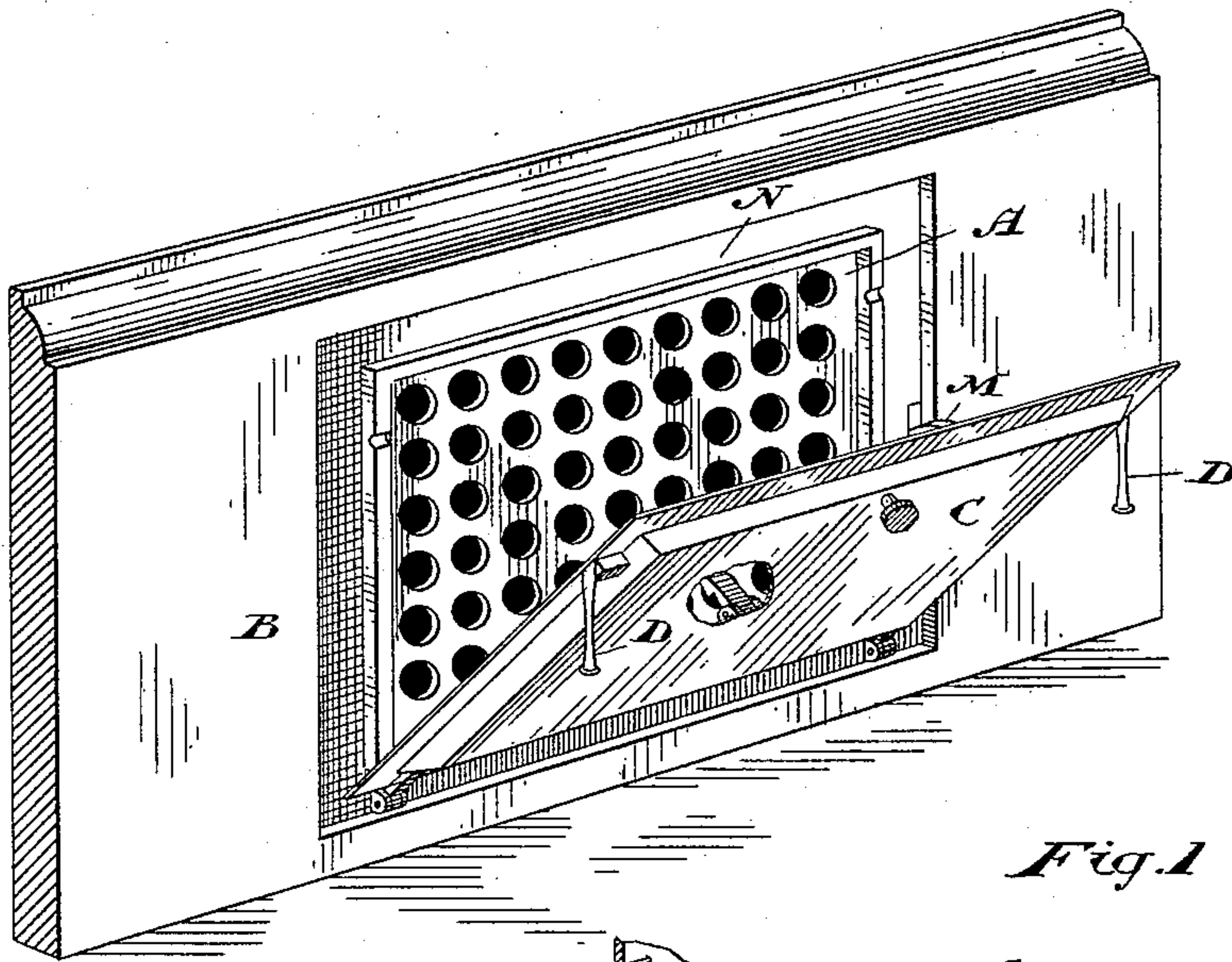


Fig. 1

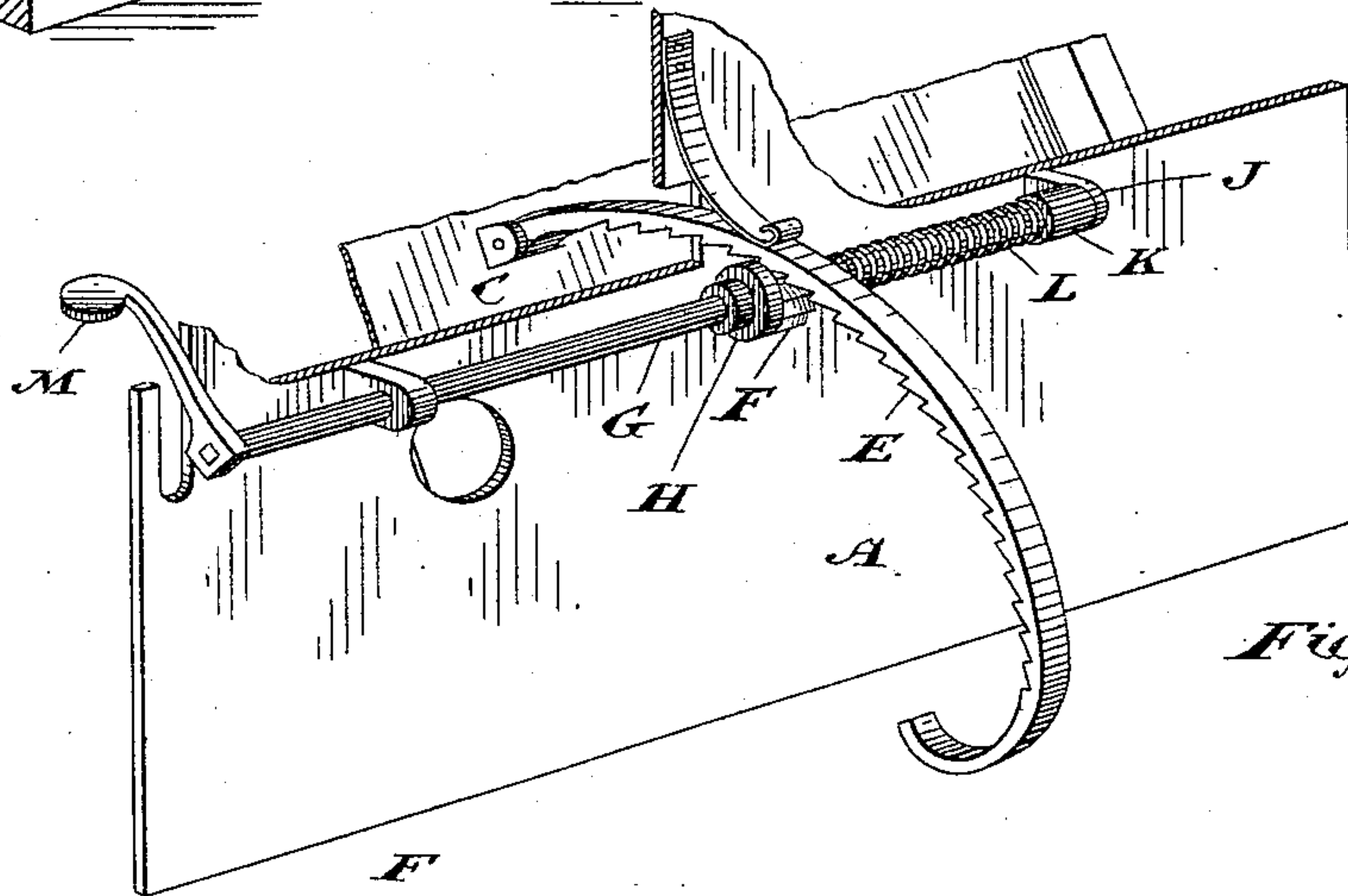


Fig. 2

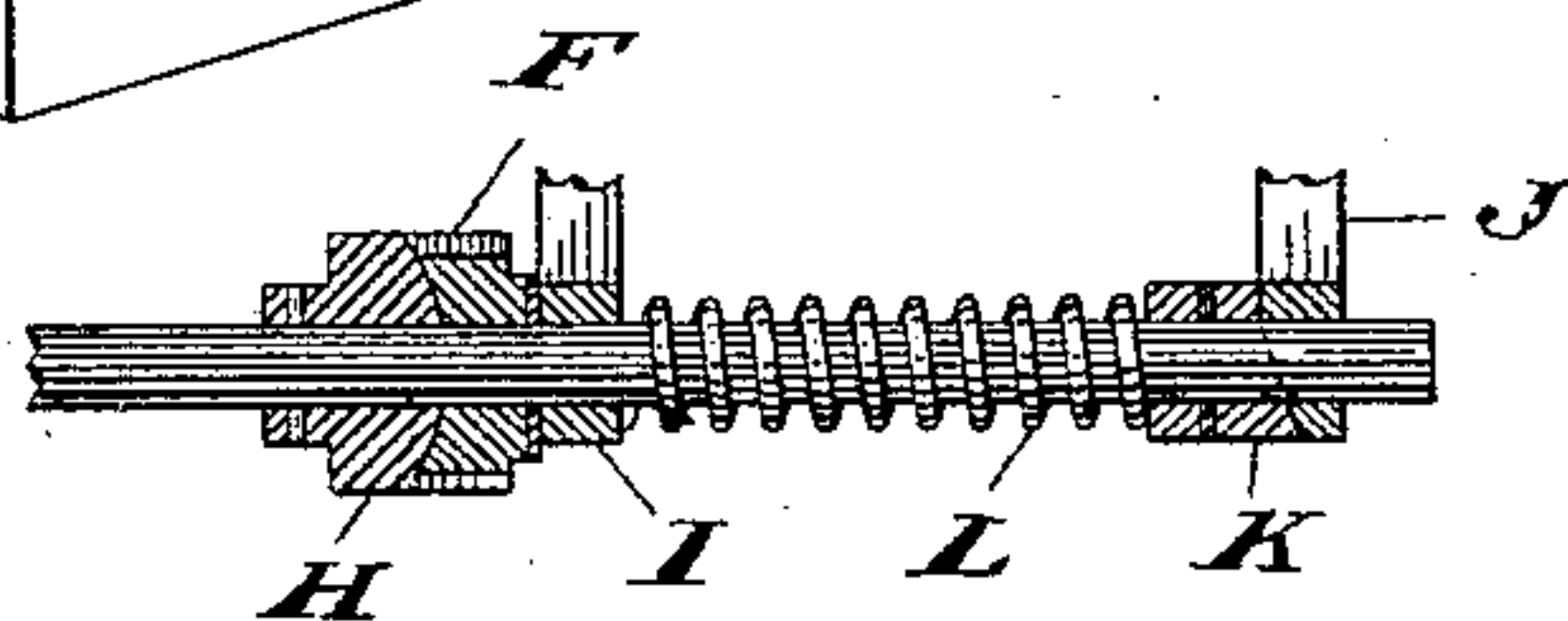


Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS G. WANLESS, OF TORONTO, CANADA.

HOT-AIR REGISTER.

SPECIFICATION forming part of Letters Patent No. 454,096, dated June 16, 1891.

Application filed July 31, 1890. Serial No. 360,548. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GRAHAM WANLESS, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented a certain new and Improved Hot-Air Register, of which the following is a specification.

The object of the invention is to design a hot-air register which may be cheaply constructed and may be used as a foot-rest closed tightly so as to exclude the dust; and it consists in the peculiar construction, arrangement, and combinations of parts, hereinafter more particularly described, and then definitely claimed.

Figure 1 is a perspective view of my improved register, showing its door partially open. Fig. 2 is an inside view of the mechanism by which the position of the door is regulated. Fig. 3 is a detail of the friction mechanism.

In the drawings, A represents a perforated plate inserted in the base-board D at the mouth of the hot-air flue.

C is a door hinged at the base of the perforated plate A, and provided with legs D, loosely pivoted on the door, so that they will drop down by their own weight when the door C is let down to form a foot-rest.

E is a curved bar pivoted on the inside of the door C, and having ratchet-teeth formed on its curved surface to engage with a ratchet-wheel F, loosely journaled on the spindle G.

On reference to Fig. 3 it will be observed that one face of the ratchet-wheel F is concaved to receive the convex face of the roller H, which, as indicated, is fixed to the spindle G. The opposite face of the ratchet-wheel F butts against the stationary bracket I, which supports the spindle G in the center. The end of the spindle G passes through a stationary bracket J, which has an eccentric face to correspond inversely with the eccentric face on the roller K, which is fixed to the spindle G, as indicated. A spiral spring L is placed on the spindle G and butts at one end against the roller K and at the other end against the bracket I.

M is a lever fixed to the spindle G and projecting through the frame N, in which the perforated plate A is contained. When the lever M is in the position indicated in Fig. 1 the roller K is in the position shown in Fig.

3. When these parts are in this position, the spring L, by acting against the roller K, holds the roller H in frictional contact with the concave surface of the ratchet-wheel F, and in this way rigidly holds the ratchet-wheel F in connection with the spindle G. By pressing the lever M the spindle G is revolved so that the position of the cam or eccentric surfaces of the bracket J and roller K are altered, thereby imparting longitudinal movement to the spindle G, which carries the roller H away from the ratchet-wheel F, thereby releasing the frictional connection between the ratchet-wheel F and spindle G, and, secondly, as a ratchet-wheel will be permitted to revolve the door C will move freely on its hinges, as its only support is the curved bar E in contact with the ratchet-wheel F, when the said ratchet-wheel is held stationary. It will be observed that the door C, by the movement of the frictional mechanism described, may be readily adjusted and held in any desired position, so as to completely cover the perforated plate A or uncover it as much or as little as may be required. When the perforated plate A is entirely uncovered, the door C will be in a horizontal position and supported by its legs D, so that it may be used as a foot-rest. When the perforated plate A is entirely covered by the door C, no dust or air can pass through the register. It will also be observed that the perforated plate with its hinged door will be much cheaper to make than the complicated pivoted wings or valves now employed, and that the frictional mechanism described will add very little to the cost of the register.

What I claim as my invention is—

A perforated plate inserted in the base-board of an apartment at the mouth of the hot-air flue and having a door at its base, in combination with a curved bar hinged to the door and having ratchet-teeth designed to engage with a ratchet-wheel journaled on the spindle and held in connection therewith by adjustable frictional mechanism, substantially as and for the purpose specified.

Toronto, June 30, 1890.

THOMAS G. WANLESS.

In presence of—

CHARLES C. BALDWIN,
E. CUMMINGS.