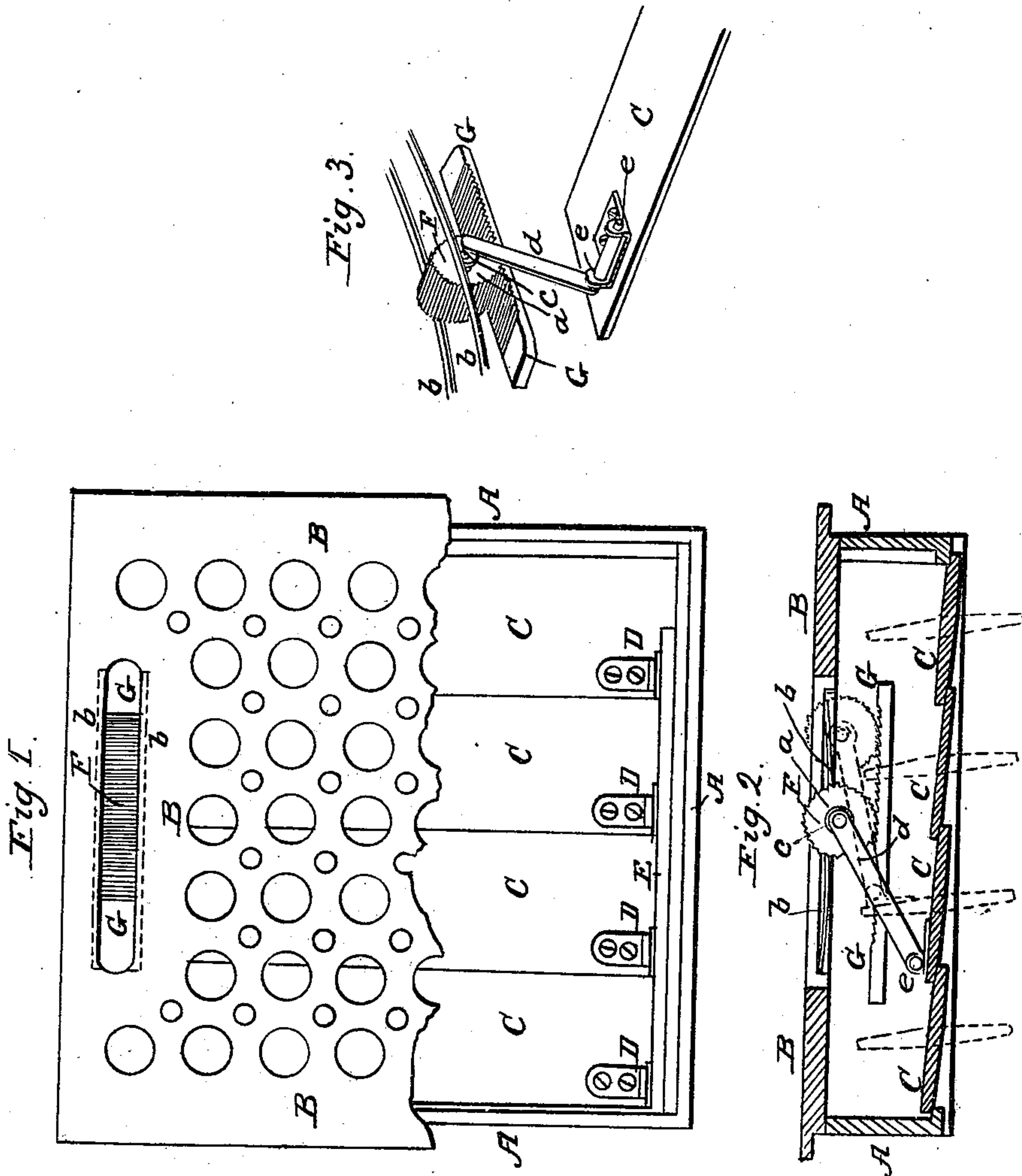


E. A. TUTTLE.
Hot Air Register.

No. 25,355.

Patented Sept. 6, 1859.



Witnesses:
Nick Hughes
M. L. Livingston

Inventor:
E. A. Tuttle

UNITED STATES PATENT OFFICE.

EDWARD A. TUTTLE, OF BROOKLYN, NEW YORK.

HOT-AIR REGISTER.

Specification of Letters Patent No. 25,355, dated September 6, 1859.

To all whom it may concern:

Be it known, that I, EDWARD A. TUTTLE, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Hot-Air Register; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, of which—

Figure 1, is a plan view of the register with a portion of the top plate removed. Fig. 2, is a cross section, taken through Fig. 1, as indicated by the red line. Fig. 3, is a perspective view of the roller and the several parts connected therewith shown as detached from the box.

A, represents the case or box of the register, and B, the perforated top.

C, C, are the leaves which are hung upon pivots placed in the curves of these leaves, so that the leaves work like Venetian blinds; each leaf has a lug on its upper surface and placed at one end, and a pivot projecting from each lug, passes into a horizontal bar E, which, connects the leaves together, so that they will all be acted upon at once. This arrangement is in many respects similar to that adopted for registers now in use.

F, is a serrated roller, the teeth of which mesh into corresponding serrations upon the face of a horizontal shelf G, which is fixed to one side of the case A, and of a sufficient height above the leaves C, C, to allow them to be opened to a vertical position. This roller has two collars *a, a*, projecting from its sides upon which press two springs *b, b*, which are fitted in recesses on each side of the oblong slot in top plate B, through which the roller F, slightly projects sufficient to be operated by the foot. A small shaft *c*, passes loosely through the axis of the roller F, which is fixed at right angles to a connecting arm *d*, which proceeds down and is pivoted to one leaf C, at *e*, as clearly shown by Fig. 3, thus connecting the leaves

with, and operating them by a roller having a movable axis. When the perforated top is secured in its place on the case, the roller is kept in place between the slot through which it passes, and the springs *b, b*, pressing upon the two collars of this roller keep it down upon the shelf G, and prevent it from slipping over the serrated teeth of said shelf while operating the register. The pressure of the foot or finger might be sufficient without the springs for this purpose.

It will be seen by the above description that the parts constituting my improved register are few and simple, and that the employment of the tread or serrated roller dispenses with the friction slide and its necessary appendages so commonly adopted for operating the leaves and which is liable to many objections, while the cost of these rollers will be comparatively nominal.

It will be observed that the axis of the roller F travels or moves upon the shelf G, and in consequence of this movement I am enabled to use a very small roller with success. In other registers, the cogged or star wheel by which the leaves are operated, must be much larger in size and more costly in construction than my roller. The size of such cogged or star wheels must also be increased with any increase of the size or weight of the leaves. A smooth roller, instead of a serrated one may be used, and the shelf may be attached to the top perforated plate if desired.

What I claim as new and desire to secure by Letters Patent, is—

The arrangement and combination with the leaves C, of the roller F, having its axis movable and traveling, and a shelf G, with or without springs (*b*), as and for the purpose herein shown and described.

EDWARD A. TUTTLE.

Witnesses:

M. M. LIVINGSTON,
MICH. HUGHES.