

No. 878,257.

PATENTED FEB. 4, 1908.

S. TUTTLE.
HOT AIR REGISTER.
APPLICATION FILED MAY 28, 1907.

Fig. 1.

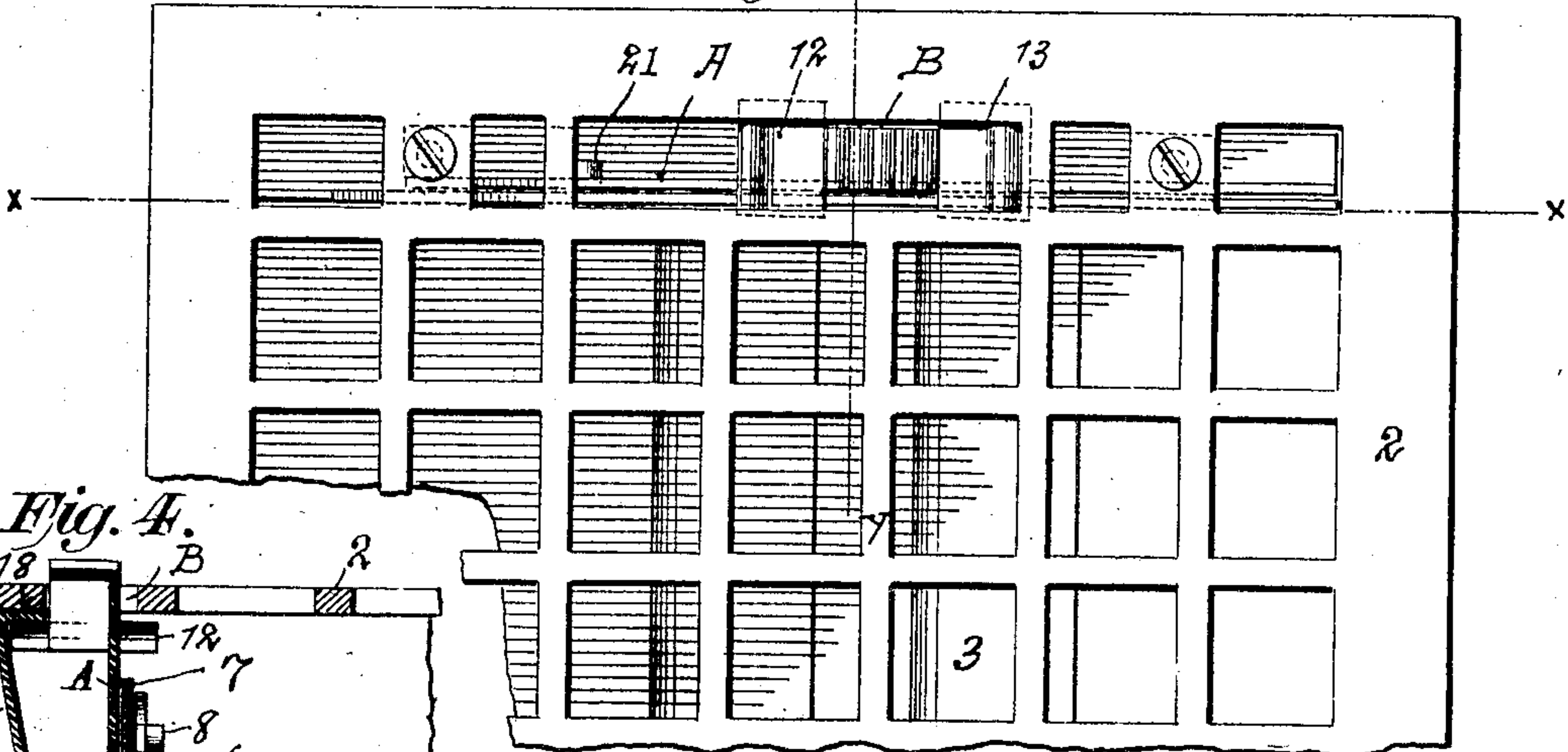


Fig. 2.

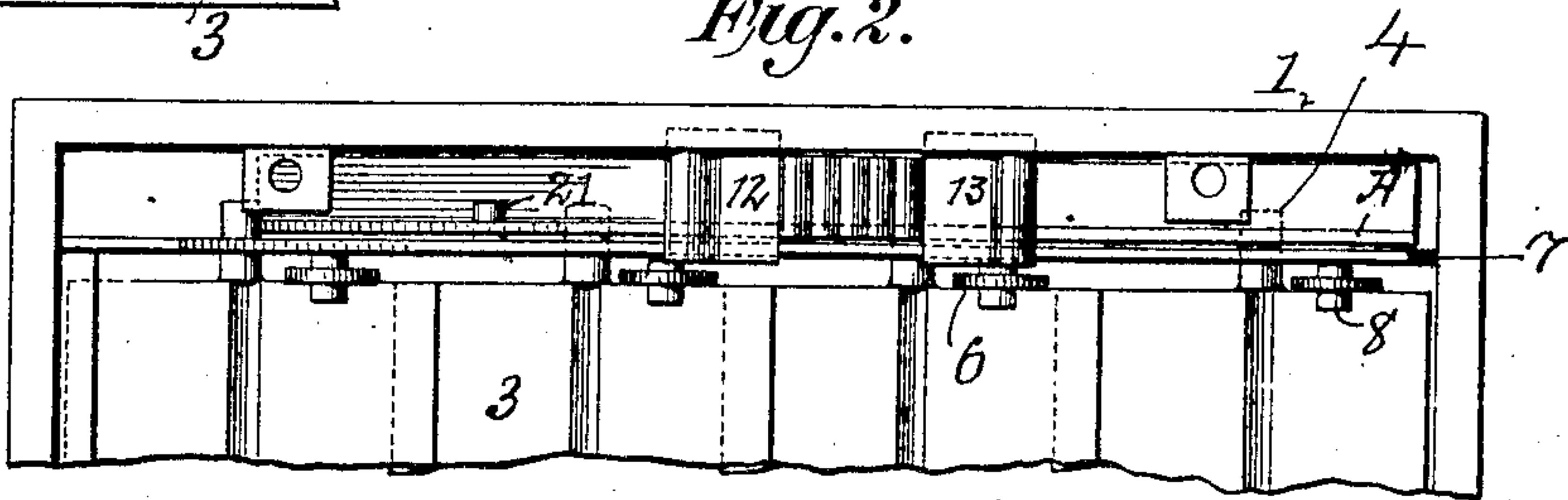


Fig. 3.

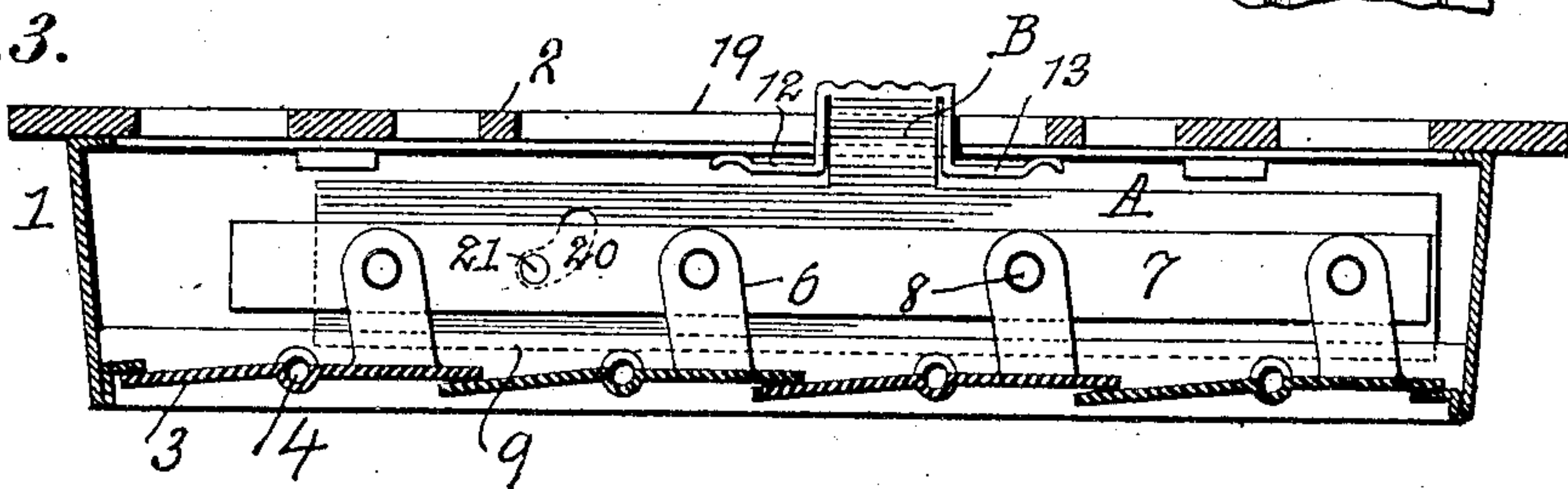


Fig. 6. a

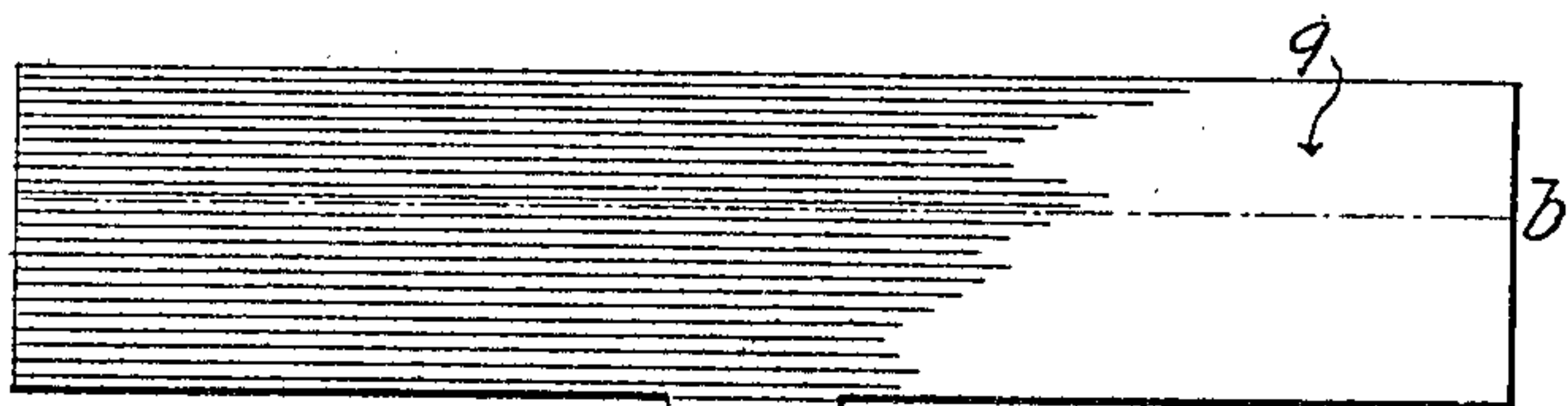
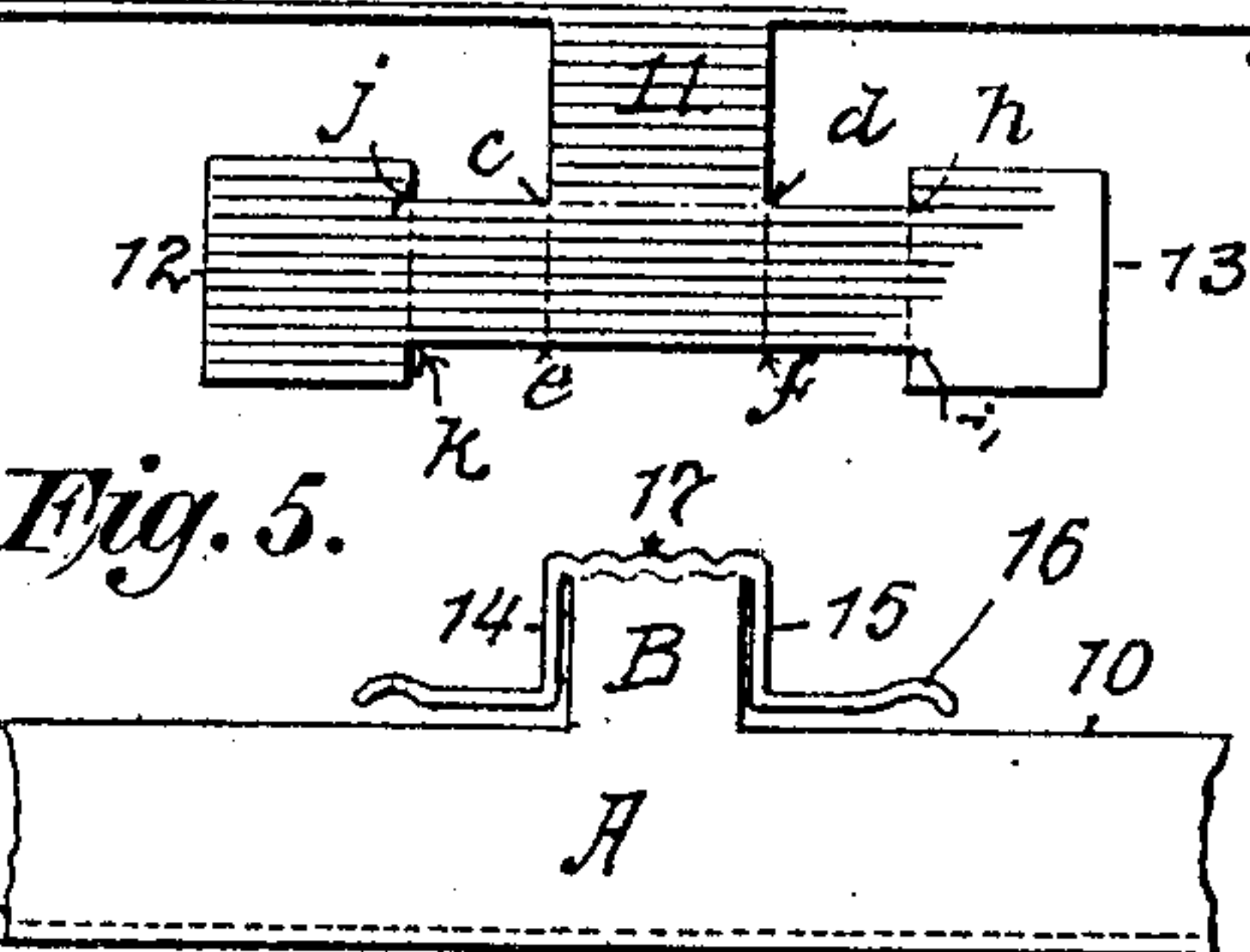


Fig. 5.



WITNESSES:

Gustave Dietrich.
Edwin H. Dietrich.

INVENTOR

Silas Tuttle
BY *Paul J. Lippman*
his ATTORNEY

UNITED STATES PATENT OFFICE.

SILAS TUTTLE, OF NEW YORK, N. Y.

HOT-AIR REGISTER.

No. 878,257.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed May 28, 1907. Serial No. 376,107.

To all whom it may concern:

Be it known that I, SILAS TUTTLE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Hot-Air Registers, of which the following is a specification.

The invention relates to registers of the kind usually employed for regulating the admission of hot air to and from rooms, and consists in the construction of the vane operating device formed of a single piece of spring sheet metal and comprising an operating bar proper, a projecting head for actuating said bar, and hence the vanes controlled thereby and a spring for holding the device, in any adjusted position.

In the accompanying drawings—Figure 1 is a partial plan view of the register showing the grille in place. Fig. 2 is a similar view with the grille removed. Fig. 3 is a section on the line *x x* of Fig. 1. Fig. 4 is a partial section on the line *y y* of Fig. 1. Fig. 5 is a partial side elevation of the operating bar and springs, and Fig. 6 shows the sheet metal plate from which the bar and springs are integrally formed.

Similar numbers of reference indicate like parts.

The rectangular metal frame 1, the grille 2 supported thereon, the vanes 3 having pivots 4 received in openings of an inner flange 5 of the frame 1, and provided each with an arm 6, and the transverse bar 7 having fixed pivot pins 8 entering openings in said arms 6; the said parts being combined as shown in the drawings are all in the prior art and, as will readily be understood, through movement of the bar 7 the vanes 3 are opened and closed.

My invention has for its object to simplify, cheapen and lighten the construction of the device for moving the bar 7. This device I make from a single piece of spring sheet metal shown in its entirety in Fig. 6. Upon one longitudinal edge of said piece is formed by bending along the dotted line *a, b*, a flange 9. On the opposite edge 10 is a T shaped projection 11, having rectangular extremities 12, 13 of enlarged area. The projection 11 is bent over at the dotted line *c, d*, to form a flange parallel to the flange 9. Each arm of the flange thus formed is bent at right angles as shown at 14, 15, Fig. 5, along the dotted lines *c, e*, and *d, f*. The rectangular portions 12, 13, are then bent on

the dotted lines *h, i*, and *j, k*, so that they lie substantially parallel to and a little above the edge 10, when the bar is placed as shown in Figs. 4 and 5, with the flange 9 downward. The rectangular portions 12, 13, may be upwardly crimped near their ends as shown at 16 and the portion 17 which lies horizontally and immediately between the parts 14, 15, may be corrugated. In this way I produce from the single piece of spring sheet metal formed as shown in Fig. 6, and bent in the manner described, first, the operating bar proper A, which includes all that portion having at its edge the flange 9, second, the upwardly projecting head B, for moving that bar which includes all that portion surmounted by the corrugated portion 17 and having on each side respectively the parts 14 and 15, and, third, the retaining springs which are the enlarged rectangular portions 12 and 13.

The device is assembled with the other parts of the register in the following manner. The lower flange 9 of the main bar A rests upon the pivot pins 4 of the vanes 3, (Fig. 4.) The outer edges of the springs 12 and 13 extend under the flange 18 of said frame, so that said springs are in frictional contact with said flange. The head B extends through an elongated transverse opening 19 in the grille.

In order suitably to connect the bar A with the bar 7, a curved slot 20 is made in bar A, which receives a fixed stud 21 on the side of bar 7. It will be apparent that by moving the head B, to and fro by hand in its opening 19, the stud 21 will be caused to follow the curved slot 20 and in this way motion will be transmitted to the bar 7, which through its arms 6 will move all the vanes on their pivots 4, to open or close said vanes. The springs 12 and 13 being, as stated, in frictional contact with the flange 18, hold the bar A in any position in which it may be placed, thus allowing the vanes to be adjusted more or less open.

I claim:

1. In a register of the type herein set forth, a frame having internal flanges, vanes, and pivot pins on said vanes, a vane operating device formed of a single piece of spring sheet metal and comprising an elongated bar, a head projecting from one edge thereof, and a spring extending substantially parallel to said edge: the said pivot pins extending through one of said frame flanges, the said

bar resting at one longitudinal edge upon said vane pivot pins and the said spring being in frictional contact with the under side of the other of said frame flanges.

- 5 2. In a register of the type herein set forth, a frame having internal flanges, vanes, pivot pins on said vanes, and a vane operating device formed of a single piece of spring sheet metal and comprising an elongated bar, a
10 flange on one longitudinal edge thereof, a head projecting from the opposite edge and leaf springs extending from opposite sides

of said head: the said pivot pins extending through one of said frame flanges, the said operating bar flange resting upon said pivot 15 pins and the said springs being in frictional contact with the under side of the other of said frame flanges.

In testimony whereof I have affixed my signature in presence of two witnesses.

SILAS TUTTLE.

Witnesses:

GERTRUDE T. PORTER,
H. I. SHIRE.