

(No Model.)

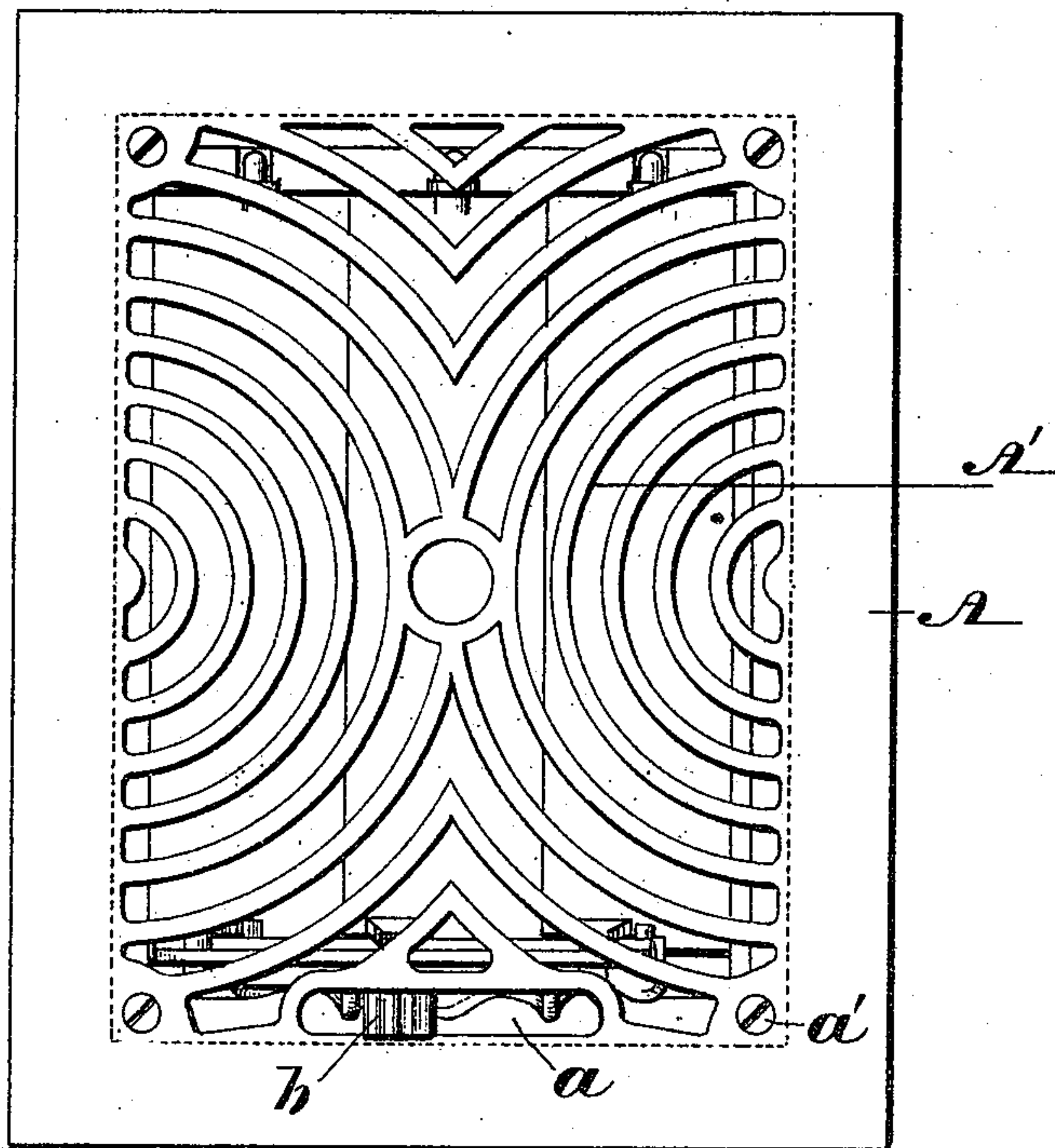
2 Sheets—Sheet 1.

W. H. MEYERS.  
REGISTER FOR HEATER FLUES.

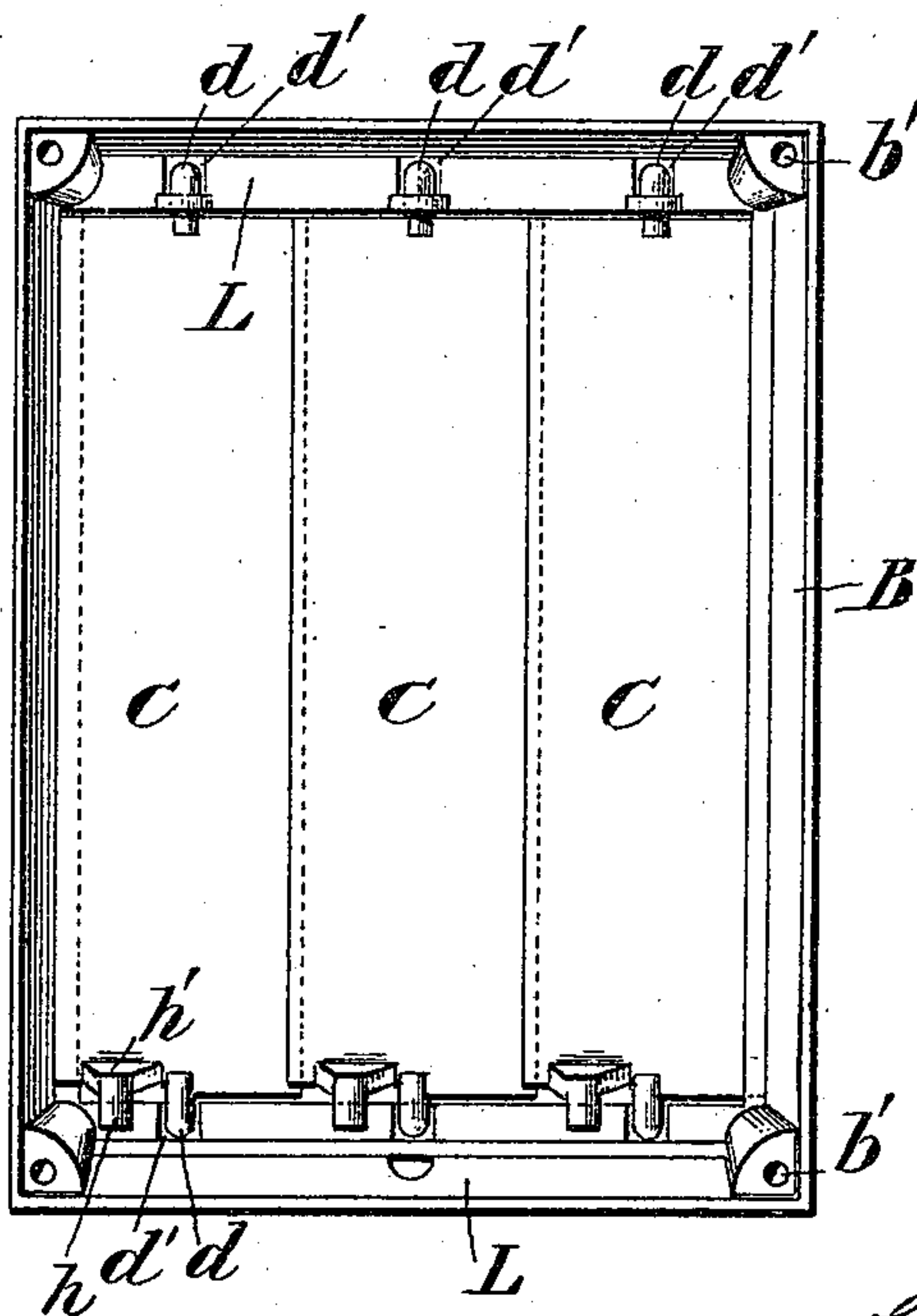
No. 501,019.

Patented July 4, 1893.

*Fig. 1.*



*Fig. 2.*



Witnesses:

E. H. Beck  
H. C. Danmore

Inventor:

William H. Meyers  
By his atty J. H. Stenton

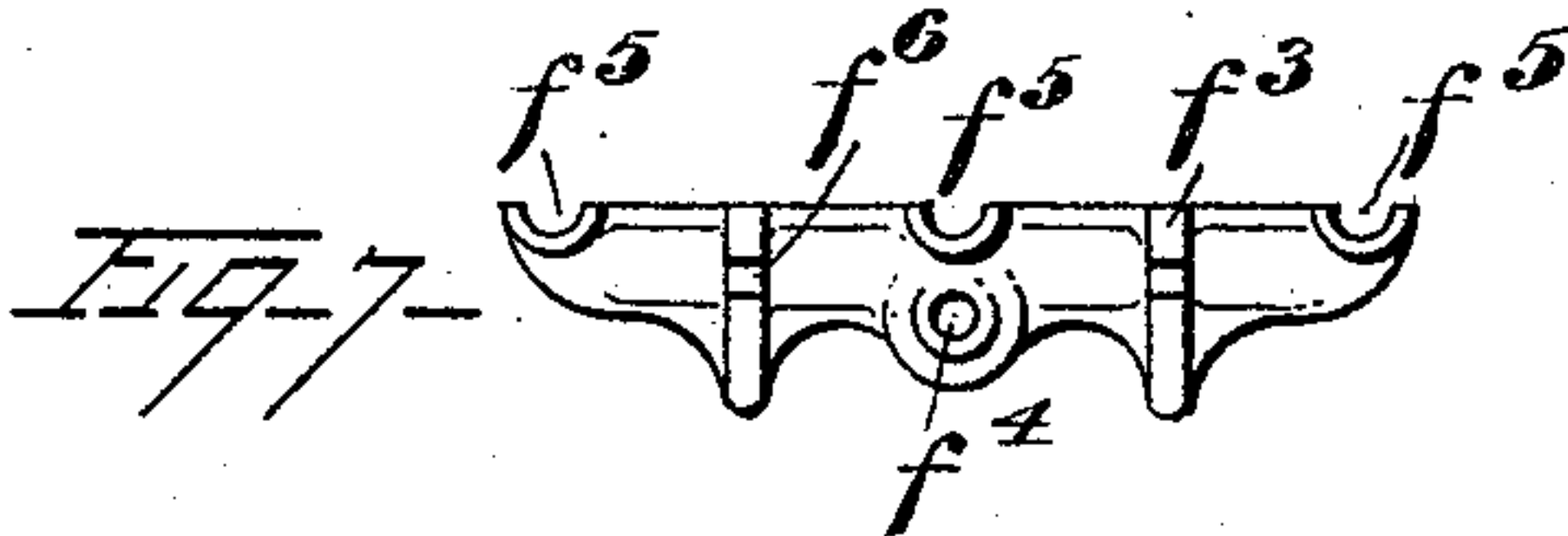
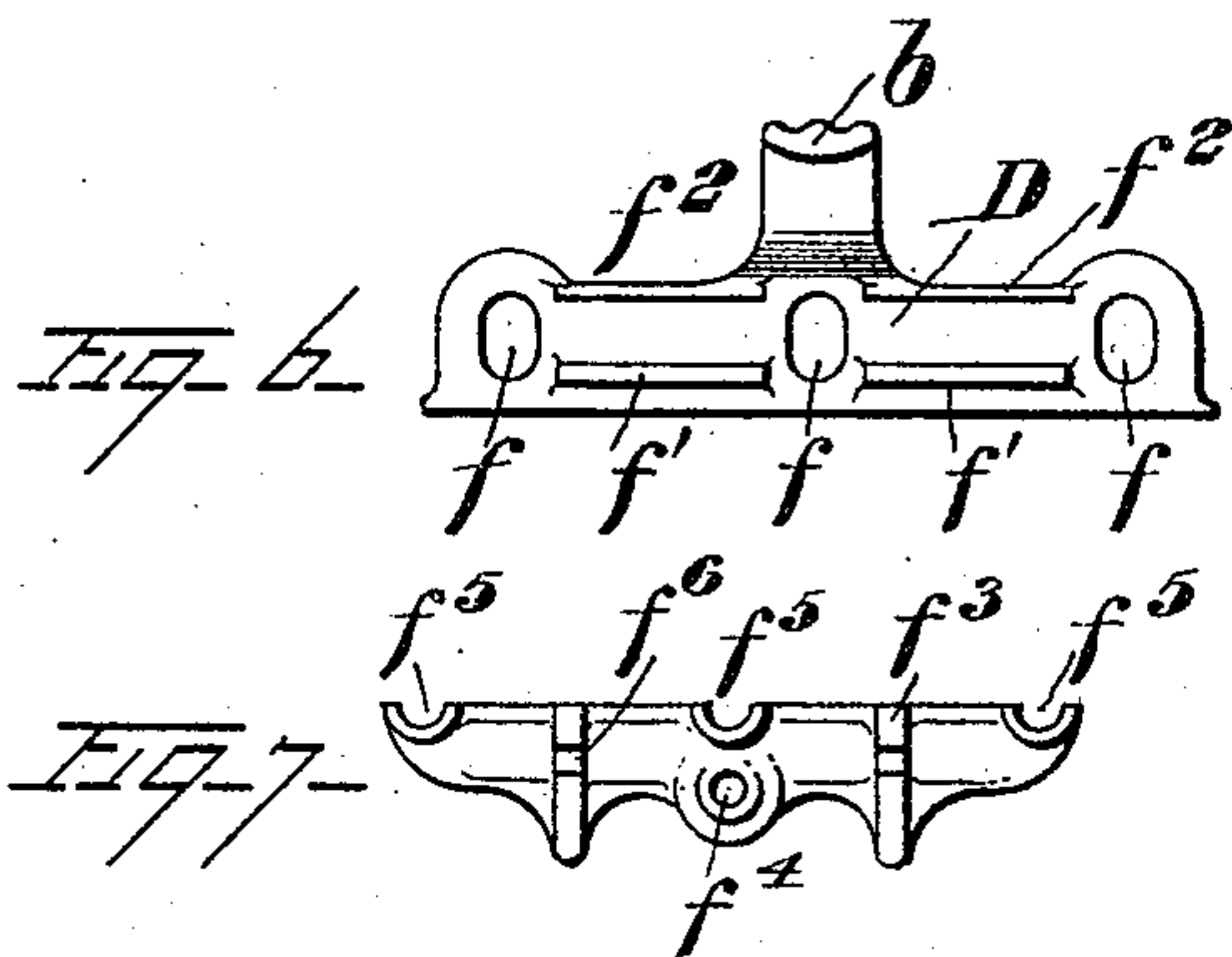
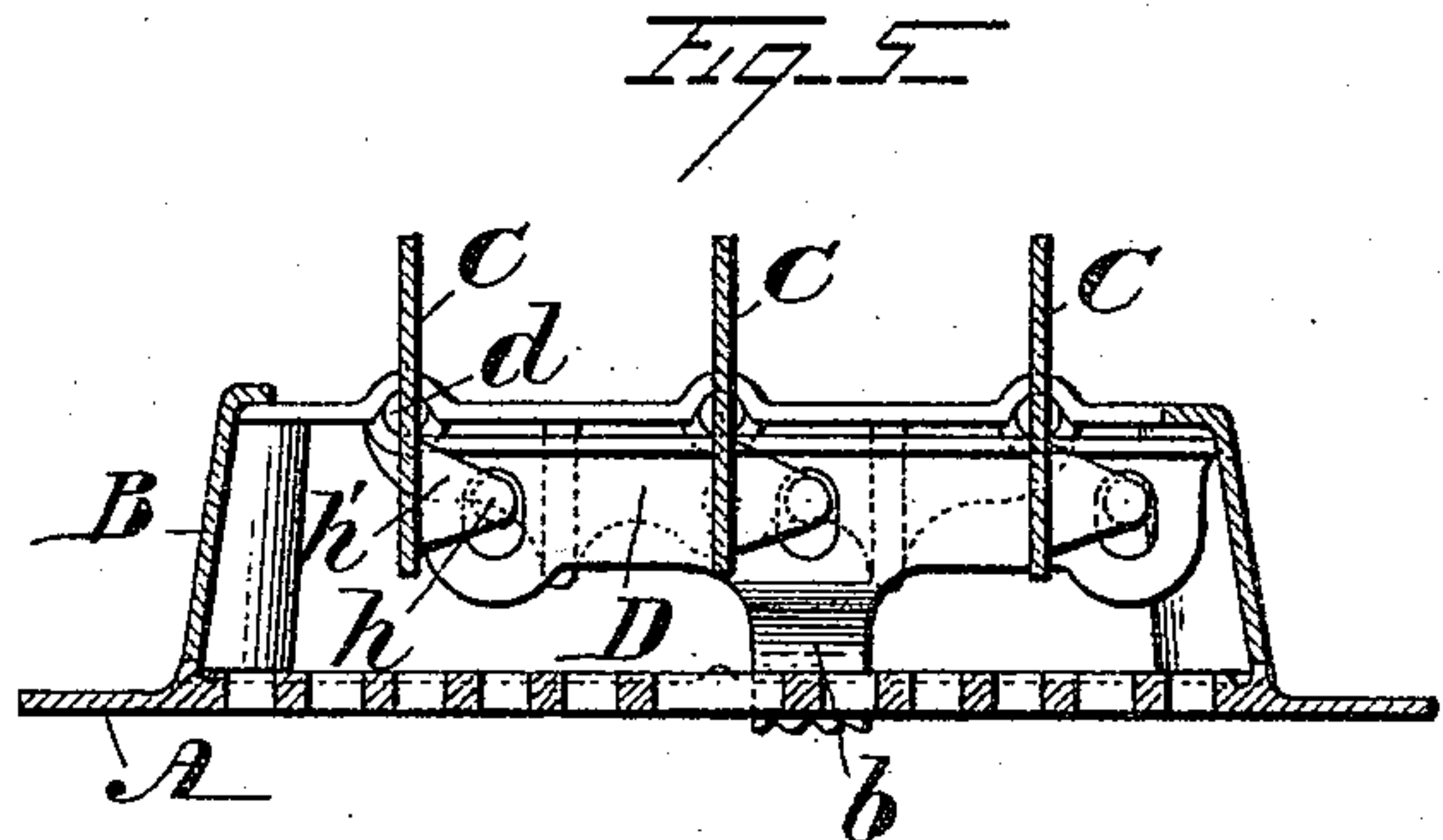
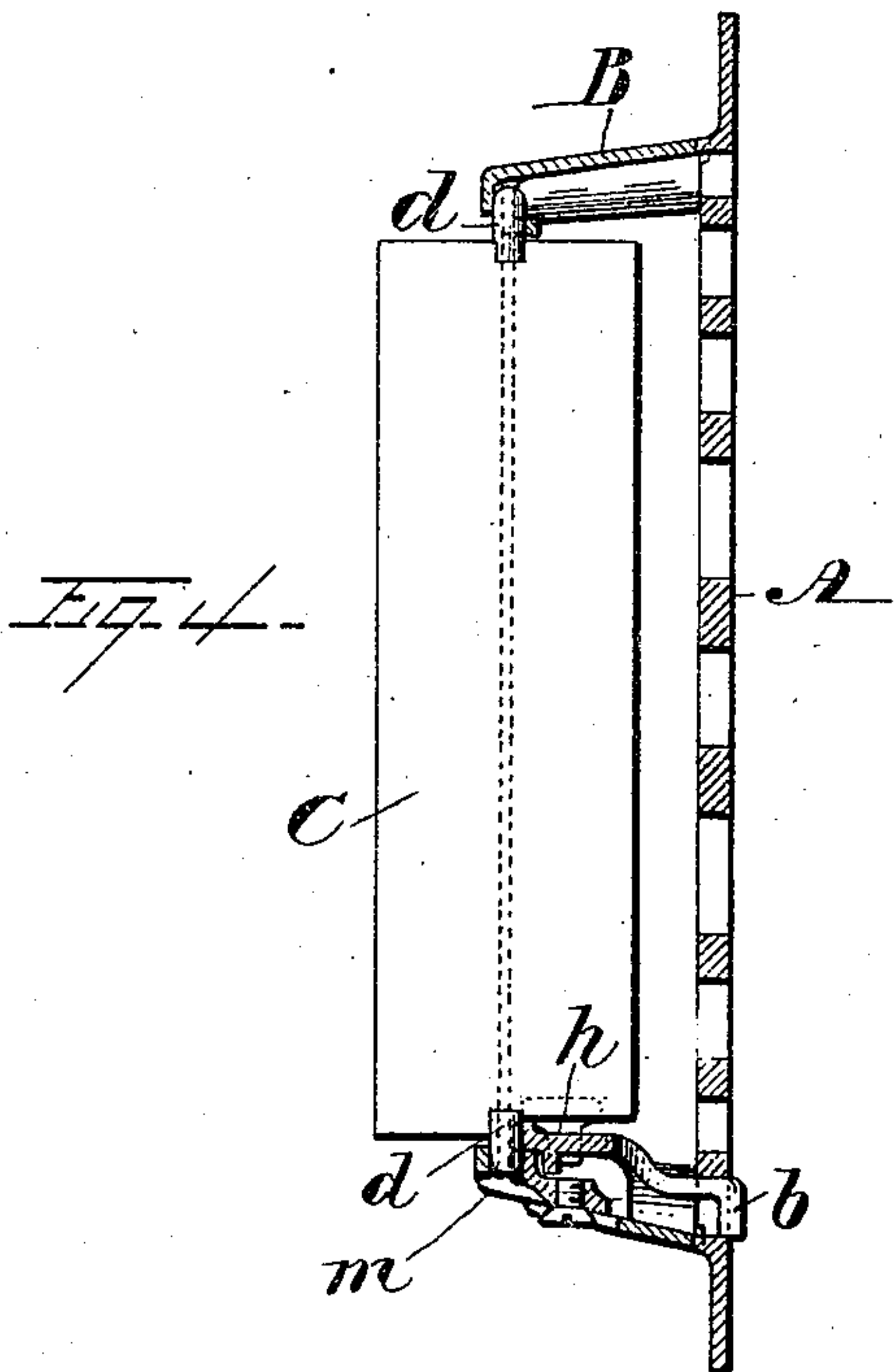
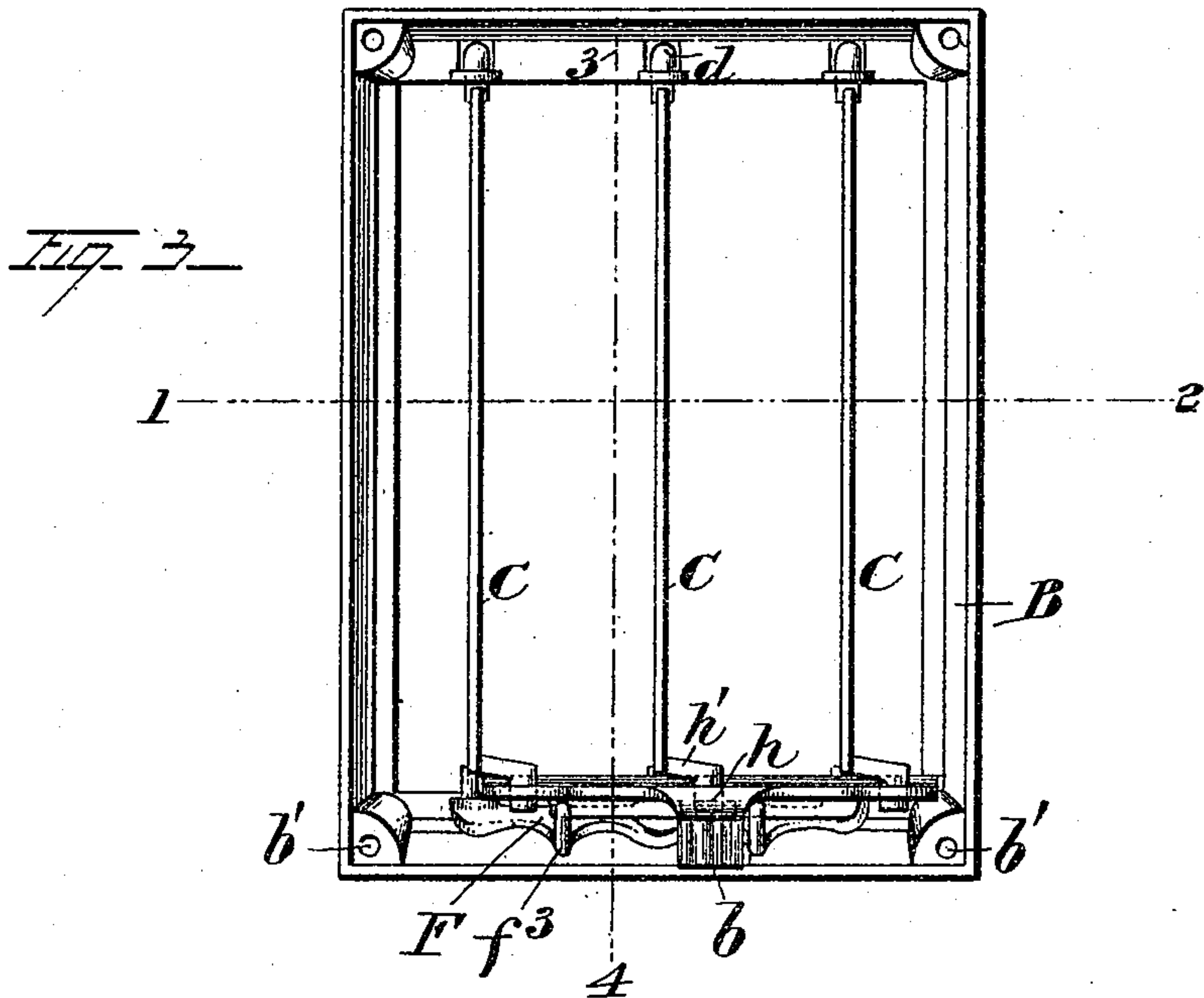
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Witnesses:

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H. C. D. Moore

Inventor:

William H. Meyers  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. MEYERS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
THOMAS DEVLIN, LOUIS J. McGRATH, WILLIAM K. BROWN, AND CATH-  
ARINE A. McGRATH, EXECUTORS OF WILLIAM V. McGRATH, DECEASED,  
OF SAME PLACE.

## REGISTER FOR HEATER-FLUES.

SPECIFICATION forming part of Letters Patent No. 501,019, dated July 4, 1893.

Application filed March 14, 1892. Serial No. 424,798. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. MEYERS, a citizen of the United States, residing at Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Registers for Heater-Flues, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to registers for heater flues and consists in the combination with a supporting frame and an open-work front plate having a laterally slotted opening, of a sliding connecting rod of specific construction operating the wings or fans, and provided with a knob adapted to project through the slotted opening; also in the combination with said connecting rod, of a guide-piece in which the same may be guided laterally, and wings or fans provided with pivoted pins at each end, with additional projecting pivoted pins at one end adapted to rest in slots in the connecting rod; also in the construction of the frame whereby the pins on which the fans rotate may rest in a solid recess; also in other minor details hereinafter mentioned and described.

In the accompanying drawings illustrating my invention, Figure 1 is a front view of the frame of the register with the front plate in place thereon. Fig. 2 is a front elevation of the frame of the register with the front plate removed and with the connecting rod and its guide bracket removed. Fig. 3 is a front elevation of the register with all its parts in place, but with the front plate removed. Fig. 4 is a vertical sectional view through the line 3—4 of Fig. 3 showing in section also the front plate in place thereon. Fig. 5 is a cross section through the line 1—2 of Fig. 3, also of the front plate in place thereon. Fig. 6 is an elevation from the underside of the connecting rod; and, Fig. 7 is an elevation from the top side of the guide bracket for the connecting rod.

The frame B has sufficient depth to allow of a free movement of the wings or fans C, and is entirely open at the back.

At the corners *b'* on the front face of it are

provided screw holes, by which the open-work front plate A may be fastened thereto by screws *a'*. This front plate has an ornamental open-work space A, covering that part of it which is upon the frame B, and at its base is provided a lateral slot *a* about equi-distant of its width, which slot is of size adapted to allow the knob *b* of the connecting rod, hereinafter mentioned, to be freely reciprocated laterally.

At the bottom edge of each end of the frame B is provided a ledge or rim L in which are recesses *d'* (see Fig. 2) to receive the pivot pins *d* on the ends of the wings or fans C which are constructed as shown in side view in Fig. 4, and in front view in Fig. 2.

On the back of the frame B at the base, an offset *m* is cast, which enables me to cast the recesses *d'* with a bottom, or solid; they projecting outward on the rear of the frame; and thus the pins *d* are given a solid bearing which is a decided improvement in devices of this character. The said pins *d* are given a round-pointed end, as seen in Fig. 2, which tends to reduce friction.

Means for retaining the pins of the fans in the lower slots and for guiding the lateral reciprocation of the connecting rod D, whereby the fans are operated, is provided in the form of a guide bracket F, shown in position in Fig. 3, and separately in Fig. 7. It will be observed that the lower recesses *d'* in the frame B are semi-cylindrical and therefore open; the other half of the recess *d'* is supplied in the guide bracket and marked *f<sup>5</sup>* in Fig. 7; hence when the parts are brought together a cylindrical recess is formed, in which the pins *d* may rotate. This guide bracket is fastened to the frame B by a screw passing down through it at *f<sup>4</sup>* into the frame.

At right angles to the greatest width of the guide bracket is provided two guide bars *f<sup>3</sup>* slotted at *f<sup>6</sup>*, in which slots the connecting rod laterally reciprocates. The connecting rod D is constructed as shown in position in Fig. 5, and separately in Fig. 6, the latter being a view of the under side to illustrate the guide bars *f' f'* cast therein, and which fit in the recesses *f<sup>6</sup> f<sup>6</sup>* of the guide bars *f<sup>3</sup>* of the guide bracket



F. Other guide bars  $f^2 f^2$  are provided, on the base of the connecting rod, parallel to the first; and these fit over the other edge of the guide bars  $f^3$  to steady the motion of the connecting rod. Recesses  $f, f, f$  are provided in the connecting rod D to receive the projecting actuating pivot pins  $h$  whereby the fans are partially rotated on the pivot pins  $d$ .

The wings or fans are provided in addition to the bearing pins  $d, d$ , at each end, with additional actuating pivot pins  $h$  mounted on the end of a projecting arm  $h'$  of such form that they shall always be in a line parallel with the bearing pivot pins  $d$ , see Figs. 2, 4, 5 and 6.

The parts being put together, the operation of the device is as follows: The knob  $b$  of the connecting rod D projects through the slot  $a$  of the frame A, whereby the connecting rod may be reciprocated; the actuating pins  $h$ , fitting in the recesses  $f$  of the connecting rod, are carried thereby; the guide bars  $f' f^2$  of the connecting rod rest in the slot  $f^6$  and on the outside, respectively, of the guide bracket F; the bearing pins  $d$ , are, by means of the projecting arms  $h'$  in a parallel plane with the actuating pins  $h$ ; thus the fans are rotated in an arc of a circle, and the bearing pins thereof and the connecting actuating pins are reciprocated in parallel planes.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a supporting frame, an open-work front plate slotted laterally, a series of wings or fans having bearing pins  $d$  adapted to rotate in recesses in the supporting frame, and a projecting arm  $h'$  carrying an actuating pin  $h$ , a laterally reciprocating connecting rod D. in which said actuating pins are mounted, and a guide-plate on which said connecting rod is mounted and whereby it may be reciprocated in a horizontal plane parallel to the line of bearing pins; said parts being constructed, combined and arranged substantially as described.

2. In combination, a supporting frame, a slotted connecting rod D supported therein and adapted to be reciprocated laterally, of a wing or fan having a bearing pin at each end adapted to rotate in recesses in the supporting frame, and an additional actuating pin  $h$  supported on a projecting arm  $h'$ , of such form that the line of actuating pins  $h$  shall always be parallel with the line of bearing pins  $d$  said actuating pin resting in a recess of the slotted rod, whereby when the latter is reciprocated laterally the wing or fan will be rotated in its bearing pins in an arc of a circle; substantially as described.

3. In combination, the supporting frame, the open work front plate F, the guide plate having transverse guide bars  $f^3$  slotted at  $f^6$ , and a connecting rod D carrying knob  $b$ , and having slots  $f$ , and guide bars  $f' f^2$  on its under surface; wings or fans provided with bearing pins  $d$  and a projecting arm  $h'$  carrying an actuating pin  $h$  adapted to rest in the recess  $f$  of the connecting rod D whereby on a lateral reciprocation thereof, the fans may be partially rotated said parts being constructed and arranged substantially as described.

4. In combination, the supporting frame, with solid bottom recesses  $m$ , the same being cylindrical at top of the frame and semi-cylindrical at bottom of the frame, wings or fans C with bearing pins  $d$  at each end adapted to rotate in said recesses  $m, m$  and projecting actuating pins  $h$ ; the stationary guide plate F. having semi-cylindrical recesses  $f^5$ , the slotted connecting rod D. adapted to receive said actuating pins  $h$  and reciprocate the same laterally; substantially as described.

In testimony whereof I have hereunto affixed my signature this 26th day of January, A. D. 1892.

WILLIAM H. MEYERS.

Witnesses:

JOHN R. NOLAN,  
H. T. FENTON.