

(No Model.)

W. E. PATCHIN.
REGISTER.

No. 504,239

Patented Aug. 29, 1893.

Fig. 1.

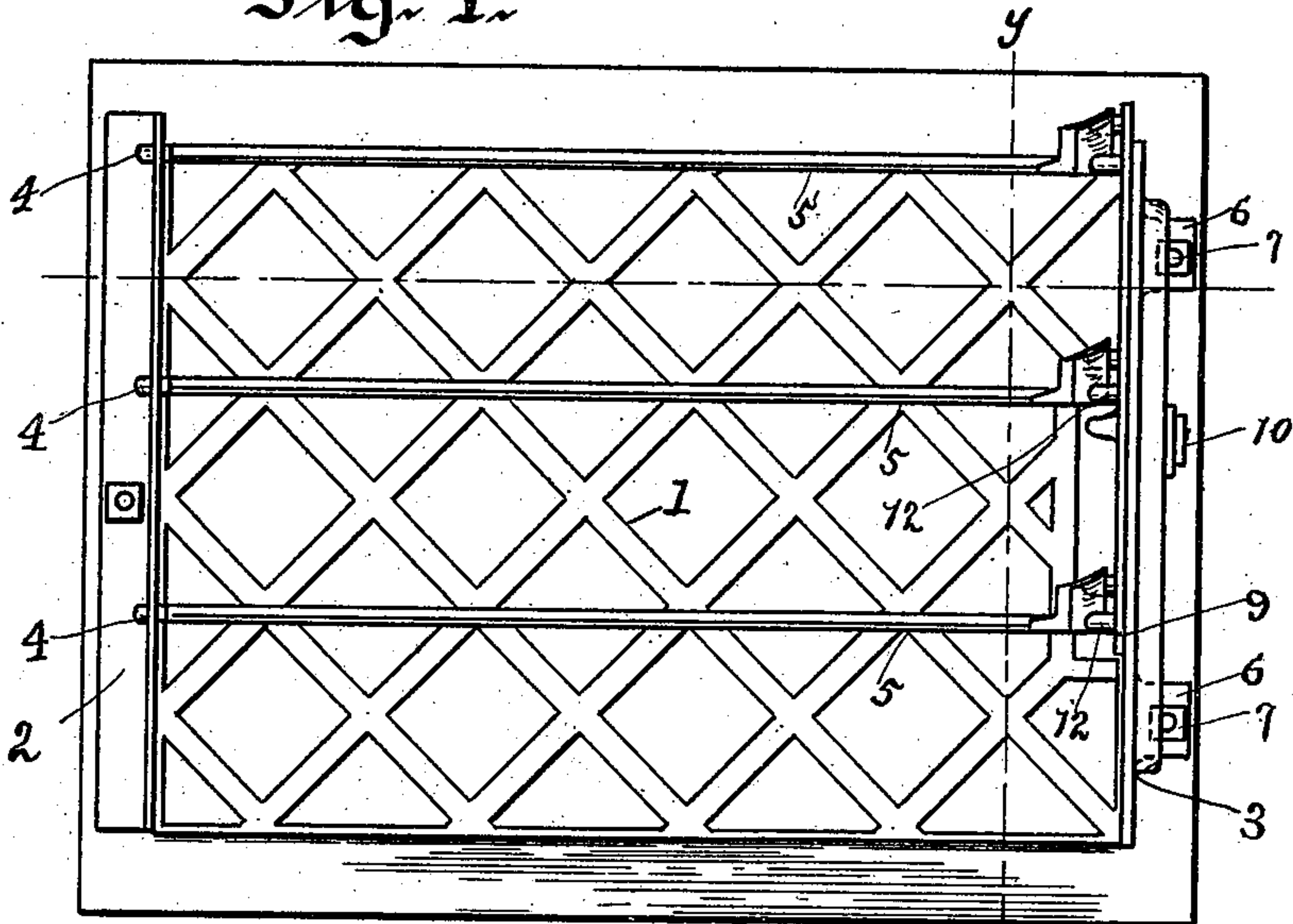


Fig. 2.

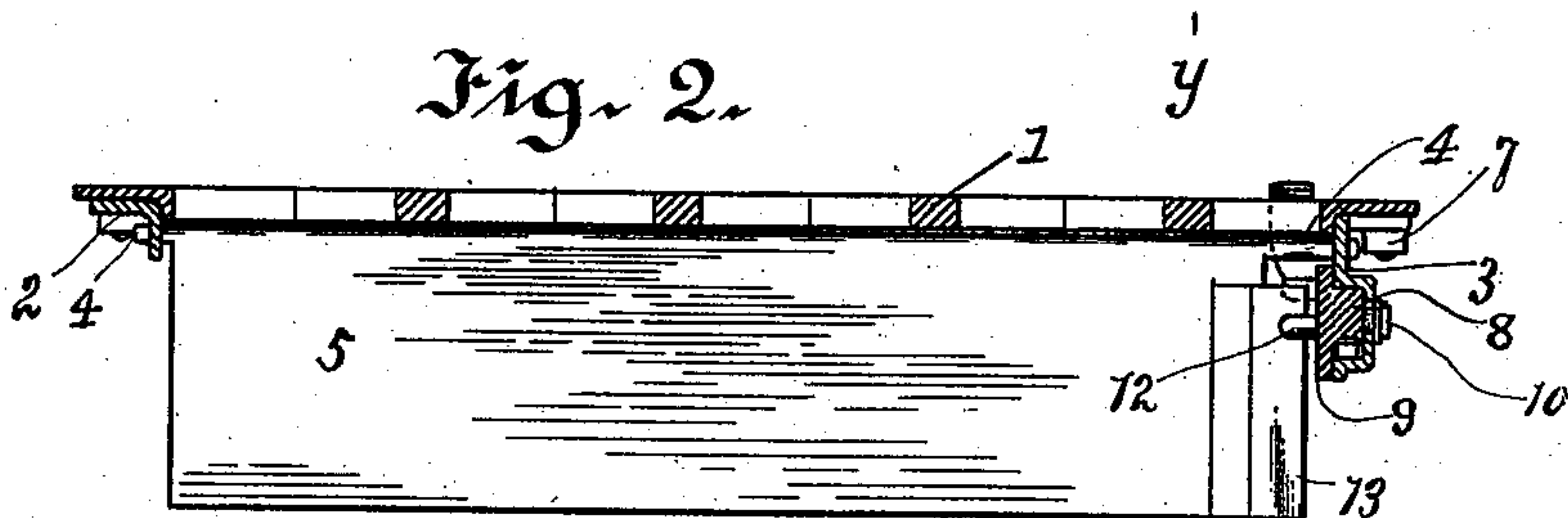


Fig. 3.

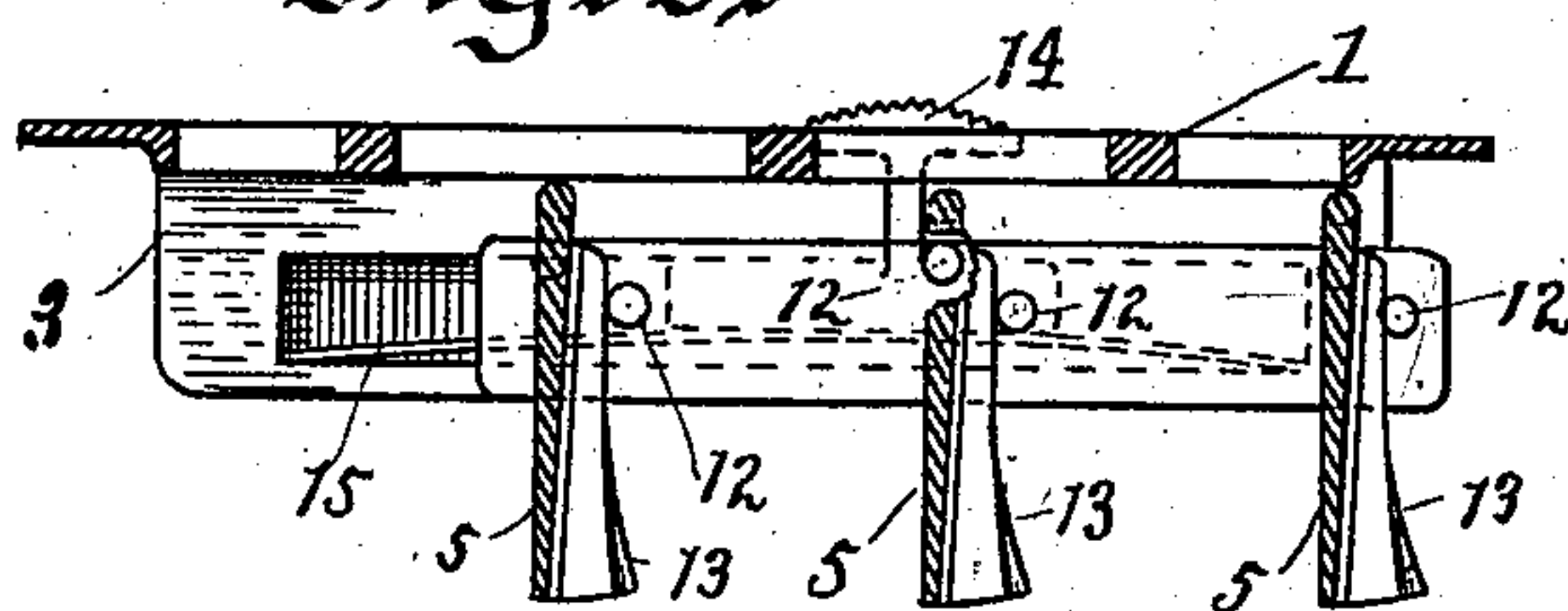


Fig. 4.

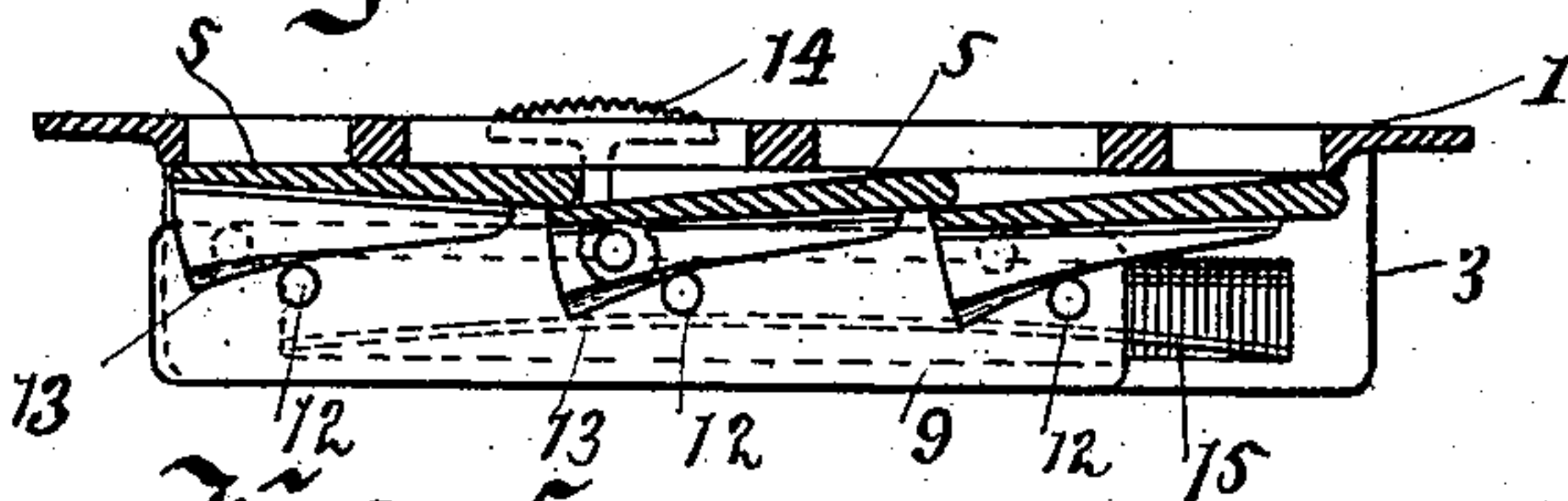
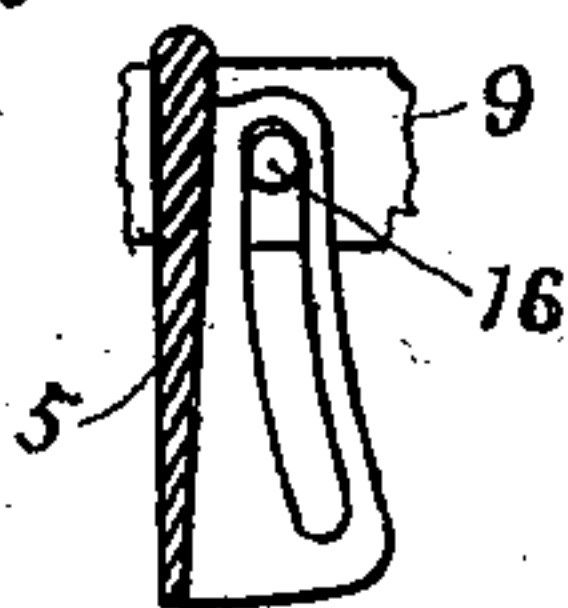


Fig. 5.



Witnesses
Thomas Durant
Albert Stewart

Inventor
William E. Patchin
by Church & Church
his Atty

UNITED STATES PATENT OFFICE.

WILLIAM E. PATCHIN, OF ROCHESTER, NEW YORK.

REGISTER.

SPECIFICATION forming part of Letters Patent No. 504,239, dated August 29, 1893.

Application filed March 18, 1893. Serial No. 466,678. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. PATCHIN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Registers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention has for its objects to provide a register adapted for use in hot or cold air flues and located either in a wall or floor as may be desired, though especially desirable in the last mentioned position because of its cleanliness, and it further has for its objects to provide one that is simple and cheap in construction and not liable to get out of order and to these and other ends it consists in certain novelties in construction and combinations of parts, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings: Figure 1 is a bottom plan view of my improved register open; Fig. 2, a longitudinal sectional view on the line $x-x$; Fig. 3 a cross-sectional view on the line $y-y$; Fig. 4, a similar view with the leaves or blades closed; Fig. 5, a view of a modification.

Similar reference numerals in the several figures indicate similar parts.

The front plate 1 of the register is of the ordinary construction, preferably constituting a support for the other operating parts, and secured to the under side of said plate at the ends are two flanged plates or castings 2 and 3 preferably independent, but connected, if desired, supporting the various operating parts.

The plate 2 is provided with the downwardly extending flange having apertures (three in the present instance) for the accommodation of the studs 4 on the ends at the upper sides of the fans or blades 5, and the plate 3 at the other end is provided with similar apertures arranged close to the plate 1 for the studs at the other end of the blades or fans. The studs on the blades or fans 5 are located at the sides of the ends thereof, instead of at or near the middles as heretofore, in order that the deep box usually employed in registers for the support of the fans, may be dispensed with, and

to simplify and lighten the construction of the device, and it will be seen that when said blades are closed they will slightly overlap each other, as in Fig. 4, and also the last one will engage the under side of the plate 1 and effectually prevent the passage of air into the room.

The plate 3 is attached to the plate 1 by suitable ears 6, through which pass securing bolts 7 and below the apertures provided for the fan studs, is provided with a recess in which operates a projecting portion 8 of a sliding plate 9. This plate is secured in position by a bolt 10 passing through a longitudinally extending slot at the outer side of the recess and on its inner side are pins 12 arranged in pairs on opposite sides of the curved edges 13 of the fans or blades 5, in such position that as the plate 9 is moved to one side or the other said blades will be opened and closed and when closed will be held tightly in contact preventing the passage of air, as in Fig. 4. The said plate 9 is further provided with an upwardly extending operating projection 14 passing above the face plate 1 and is adapted to be held in any position of adjustment desired by a bow spring 15 located in the recess in plate 6 and engaging at its middle the projection 8 on the plate 9, the friction being sufficient to prevent accidental movement, but not to interfere with the intentional opening and closing of the register.

The above construction is very simple and cheap, besides furnishing no projecting parts for the accumulation of dust and dirt as do the present forms of register, is materially lighter than the present style, as the long box or bearing necessary for fans hung at the centers of the end is dispensed with.

It will be understood that other means than the pins operating on opposite sides of the curved ends of the blades could be provided, and I do not desire to be confined to the arrangement above described, as for instance, the ends of the blades could be provided with a curved slot as in Fig. 5, and single pins 16 on the plate 9, but such a construction would be more expensive besides having more apertures for the passage of air when the register is closed, and I do not find it as desirable as the one shown in the other figures. Though I prefer to curve the flanges on the ends of

the blades or fans as shown herein, it will be understood that they could be straight or inclined, so that practically the same movement could be given said blades and a single stud operating beneath, could be used, the weight of the blades being sufficient to cause them to fall open, but I prefer the arrangement shown as it is simple, light and cheap.

I claim as my invention—

10 1. In a register, the combination with the face plate and supports thereon, of the fans or blades pivoted at the sides of their ends upon said supports, the slide mounted in rigid guides on one of the supports movable cross-
15 wise of the blades and sliding connections between said slide and the blades between their pivots and the free edges for actuating them positively in both directions, substantially as described.

20 2. In a register, the combination with the face plate and supports thereon, of the fans or blades pivoted at the sides of their ends upon said supports and having the inclined ends, and the actuating slide, movable in rigid
25 guides and loosely engaging said inclined ends for actuating and holding the blades on their pivots, substantially as described.

30 3. In a register, the combination with the face plate and supports thereon, of the fans or blades pivoted at the sides of their ends

upon said supports and having the inclined ends and the actuating slide moving in rigid guides having the pins arranged on opposite sides of the inclined ends for actuating the blades and holding them, substantially as described. 35

4. In a register, the combination with the face plate, the fan supports thereon, one of them having the recess, and the sliding plate operating in the recess, of the fans or blades
40 pivoted to said supports at the ends near their sides and the projections on the sliding plate cooperating with the blades for opening and closing them, substantially as described.

5. In a register, the combination with the
45 face plate, the two flanged plates secured thereto having apertures for the journals of the fans, one of said plates having the recess in its face, the sliding plate operating therein, and the friction spring, of the fans or blades
50 pivoted in the plates near their sides and arranged to overlap when moved in one direction, and connections between said blades and the sliding plate for causing their operation
55 by the movement of the latter, substantially as described.

WILLIAM E. PATCHIN.

Witnesses:

FRED F. CHURCH,
G. A. RODO.