

C. CLEAR.  
HOT AIR REGISTER.  
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947,634.

Patented Jan. 25, 1910.

Fig. I.

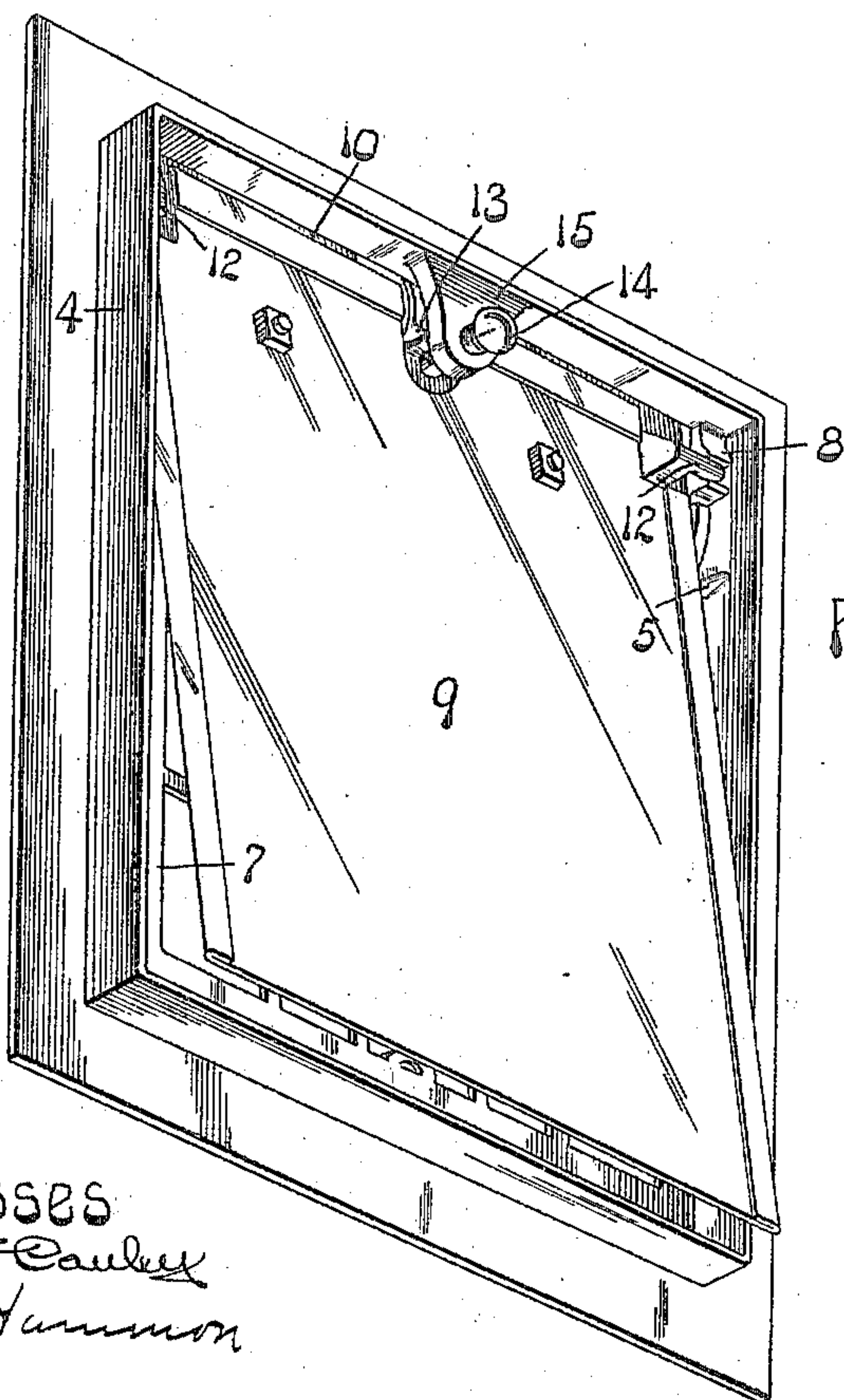
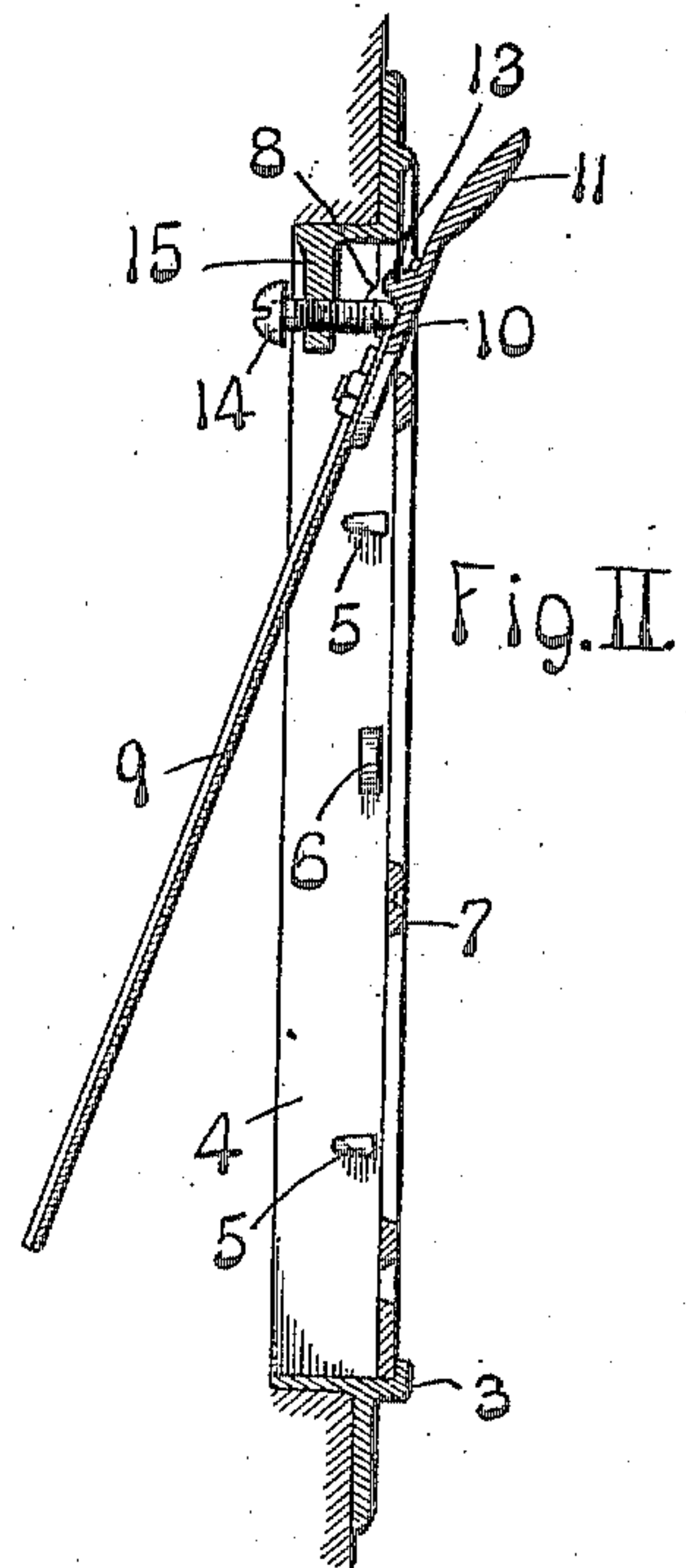
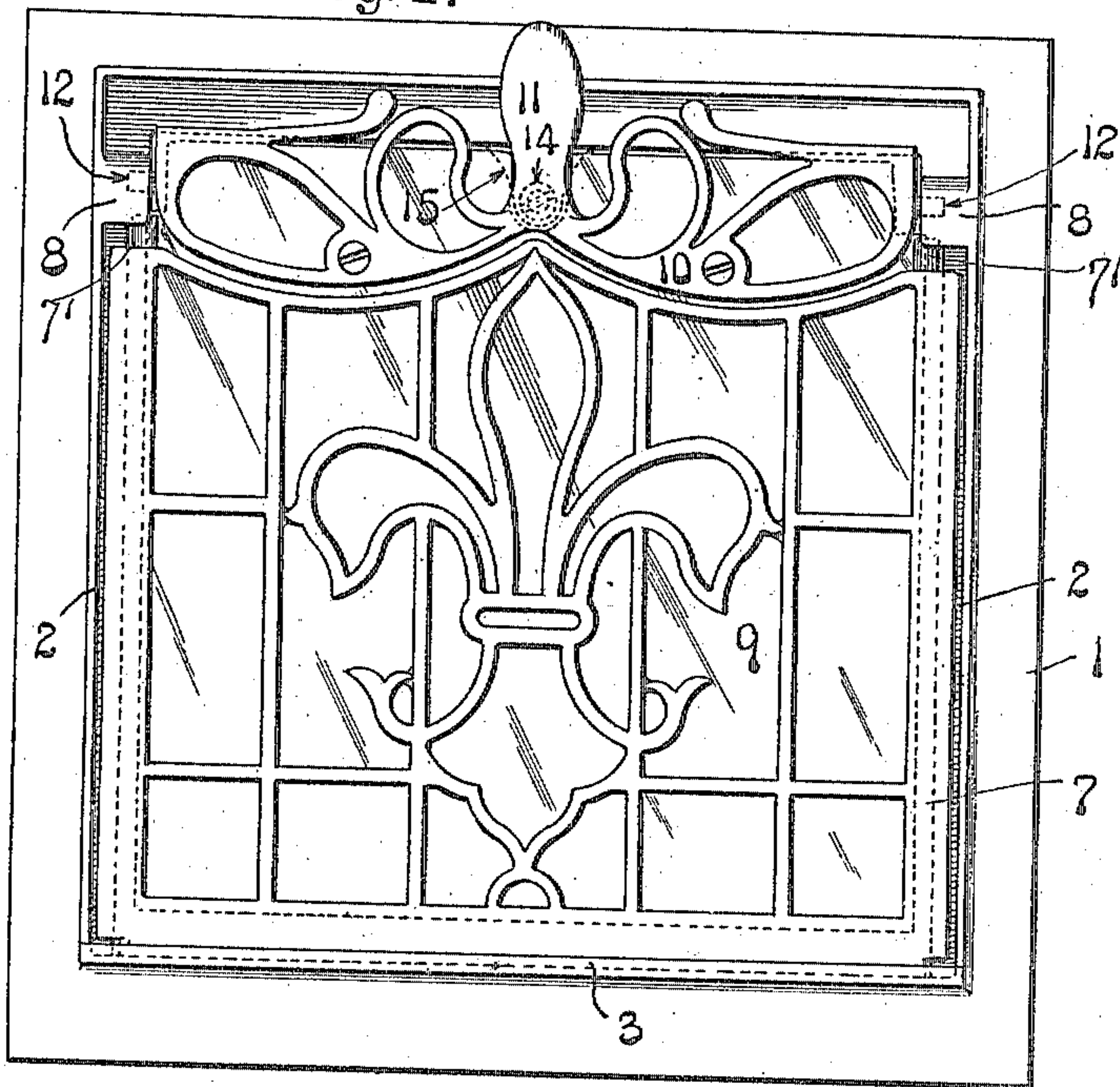


Fig. III.

Witnesses  
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# UNITED STATES PATENT OFFICE.

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HOT-AIR REGISTER.

947,634.

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*To all whom it may concern:*

Be it known that I, CHARLES CLEAR, a citizen of the United States of America, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Hot-Air Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to registers used in conjunction with the flues leading from hot air heating furnaces.

The invention has for its object the production of a simple construction, whereby the valves of hot air registers may be caused to remain in set or adjusted positions, in order that the desired amount of hot air may pass through the register from the valves, and further, to make the valve retaining means of an adjustable construction, in order that when the cooperating parts of the valve holding means become worn, or set, due to long continued use, they may be restored to their original condition.

Figure I is a front elevation of a hot air register having my improvement incorporated therein. Fig. II is a vertical cross section through the register. Fig. III is a rear perspective view of the register.

In the accompanying drawings: 1 designates the rectangular frame of my register, having interiorly thereof side flanges 2, while at the bottom and front of the frame is a front pocket flange 3.

7 designates a grille that seats against the flanges 2 of the frame, and the bottom of which rests in the front pocket flange 3. This grille is held in place in the frame 1 by entering the fingers 7' at the upper corners of the grille back of the sockets 8 to be hereinafter more particularly referred to.

6 are ears projecting from the rearwardly extending side walls 4 of the register frame, and 5 are lugs on the side walls 4 to which ears and lugs fastening means may be applied for the purpose of securing the register frame in place in the wall in which it is mounted.

Near the upper ends of the register frame, and within said frame, at its sides are sockets or boxes 8 which serve as bearings for the pintles of the valve hanger about to be described, the sockets being open at their backs, as seen in Fig. III.

9 designates the valve of my register lo-

cated within the register frame, and the main portion of which is adapted to hang suspended immediately back of the grille 7 when it is in vertical position. The valve 9 is attached to, and supported by, a swinging hanger 10 that is provided with an upwardly extending and centrally located handle 11. At the ends of the hanger 10 are pintles 12 that rest in the sockets or boxes 8 and are adapted to turn therein. At the horizontal center of the valve hanger is a lug 13 that is in axial alinement with the pintles 12 and is provided with a curved face, as seen in Figs. II and III.

14 designates a pressure binding screw adjustably mounted in the lug 15 depending from the top part of the register frame and located opposite to the lug 13 on the valve hanger 10.

To put my register in condition for practical use, and to provide for the valve 9 being retained in any position to which it may be set, it is only necessary to turn the pressure binding screw 14 forwardly to a sufficient degree to cause it to exert a desired binding pressure against the lug 13, whereby said lug and the central portion of the valve hanger 10 are forced forwardly, and the pintles 12 of the valve hanger are moved into firm and binding contact with the bearings in the socket 8, so that the pintles and sockets will have firm frictional engagement with each other. Then, when the valve hanger is moved, through the instrumentality of its handle 11, the hanger and valve will remain in any position to which they may be adjusted, due to the close frictional binding contact between the pintles and the sockets. It is obvious that by my construction, the degree of frictional binding contact between the pintles and the sockets may originally be made whatever is necessary to prevent accidental movement of the valve, and further, that should the original degree of frictional binding contact between these parts become diminished due to wear of the parts, or due to the hanger 10 becoming set in a position to which it has been sprung by the pressure binding screw, the frictional binding contact between the pintles and the sockets may readily be increased in degree by further forward movement of the pressure binding screw 14.

A more important advantage in my hot air register to which I wish to draw attention is that the described construction per-



mits of the valve and its hanger being readily replaced by a new valve and a hanger in the event of these parts becoming broken or impaired by long continued use, it being necessary, in order that the previously used valve hanger may be removed, only to retract the pressure binding screw 14, thereby relieving the valve hanger. The valve hanger may then be separated from the register frame by the removal of its pintles from the sockets 8, and a new valve and hanger be put in place, after which, upon readjustment of the pressure binding screw, the new valve may be operated the same as the valve originally in use.

I claim:

1. In a hot air register, the combination of a frame provided with sockets, a valve device having pintles at its ends arranged in said sockets, and adjustable binding means whereby pressure may be exerted against said valve device at a point intermediate of its ends in the axial line of said pintles to force said pintles into such firm contact with said sockets as to provide for the valve device being held in a set position.

2. In a hot air register, the combination of a frame provided with sockets, a movable valve device having pintles at its ends, arranged in said sockets, and an adjustable pressure screw engaging both said frame and said valve device at a point intermediate of the ends of the device to exert pres-

sure against the valve device in the axial line of said pintles and hold the pintles in such firm contact with said sockets as to maintain the valve device in a set position.

3. In a hot air register, the combination of a frame provided with sockets, a valve, a hanger for said valve provided with pintles arranged in said sockets, and a pressure binding screw supported by said frame and arranged to exert binding pressure against the central portion of said hanger in the axial line of said pintles.

4. In a hot air register, the combination of a frame provided with sockets, a valve, a hanger for said valve provided with pintles arranged in said sockets, and having a lug at the back thereof, and a pressure binding screw supported by said frame, and bearing against said lug to hold said pintles in firm contact with said sockets.

5. In a hot air register, the combination of a frame provided with sockets and having a lug depending from its upper portion, a valve, a hanger for said valve having pintles arranged in said sockets, and a pressure binding screw mounted in said lug and adapted to exert binding pressure against said hanger in the axial line of said pintles.

CHAS. CLEAR.

In the presence of—

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HOWARD G. COOK.