J. B. MATHEWS.

HOT AIR REGISTER.

APPLICATION FILED MAR. 23, 1911.

997,146. Patented July 4, 1911.

Fig. 1.

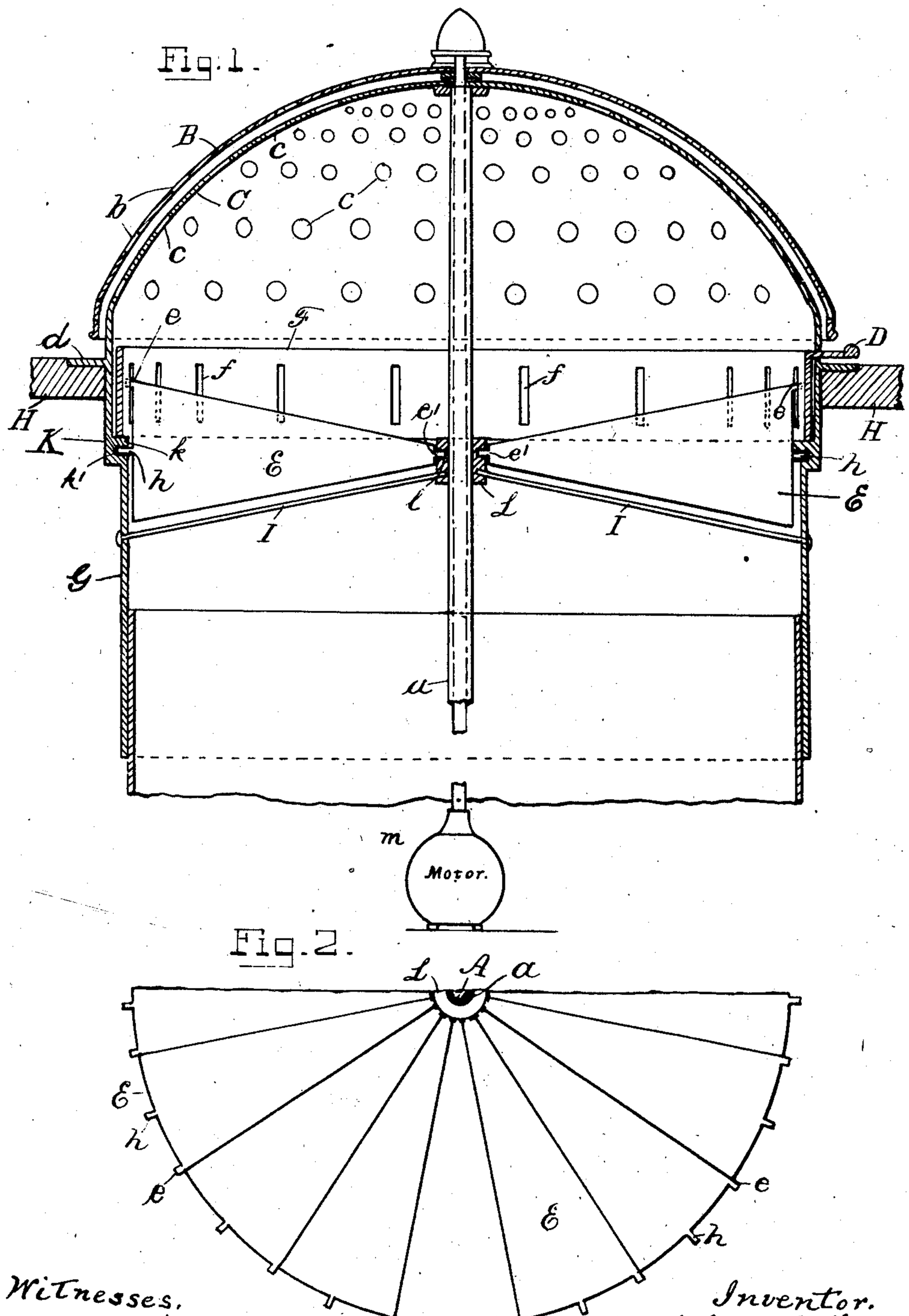

Fig. 2.

Witnesses.
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JULIA B. MATHEWS, OF PORTLAND, MAINE.

HOT-AIR REGISTER.

997,146. Specification of Letters Patent. Patented July 4, 1911.

Application filed March 23, 1911. Serial No. 616,410.

To all whom it may concern:

Be it known that I, JULIA B. MATHEWS, citizen of the United States, residing at 39 Lafayette street, Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Hot-Air Registers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to hot air registers, and has for one of its objects, to diffuse the hot air from a furnace so that all parts of a room will be brought quickly, to a nearly equal temperature.

Another object of the invention is to heat the lower strata of the air in a room, direct from the register, the heated air then rising through the cooler strata to the higher levels of the air.

The accompanying drawings illustrate the invention, its various features being referred to by letters, similar letters denoting corresponding parts in the several views.

In the drawing Figure 1 is an elevation partly in section, of the device, some of the damper wings being omitted to better disclose the construction. Fig. 2 is a plan view of one half of the damper system.

The letter A designates a vertical spindle which carries on its upper end a dome B provided with perforations *b*, *b*. The lower end of the spindle is connected with a motor of a type shown at *m* in the drawing, or any preferred means by which it may be rotated.

On the spindle A is a sleeve *a*, partly supporting a fixed perforated inner dome C, the lower end of said sleeve being provided with a suitable support beyond the limits of the drawing, and not claimed as a part of this device. The inner dome C is provided with perforations *c*, *c*, and is supported on its outer extremities on a base K, which has a peripheral flange *d*, recessed in the floor H.

An interior annular shoulder *k*, supports a broad band F, provided with vertical spaced slots *f*, *f*, and just below said shoulder *k* are bearings *k'*, for pins *h*, on the outer ends of the damper wings E, the pins *e'* on the inner ends of the wings E, engaging sockets *l*, in a block L, fixed on the sleeve *a*.

I, I are rods extending from the casing G to the block L to support the latter in the desired position. On an outer corner of each wing E, is a projection *e*, which engages one of the slots *f*, in the band F. This band F is rotatable back and forth, within limits, by means of the finger piece D, which projects from a side of the band through a horizontal slot in the bottom of the dome B. When the part D is pushed in one direction the projections *e* in the slots *f*, will describe an arc of a circle, causing the wings E to rotate on their axial pins *e* and *h* and be closed down, this checks the upflow of hot air. On pushing the part D in the other direction the projections *e* are forced upward and the damper is opened. It is intended that the upper dome B, shall be kept rotating when it is desired to widely diffuse the hot air throughout a room, at other times the heated air will pass out through the openings in both domes and at the open bottom of the outer dome, with substantially the same effect as with an ordinary register.

What I claim and desire to secure is:

1. A hot air register comprising an outer perforated dome mounted for rotation, a fixed perforated dome within said outer dome and spaced slightly from it, a casing beneath said domes, a block fixed on a central vertical support, damper wings tapered toward their inner ends and having bearings on said casing and said block, means to actuate said damper wings and means to rotate said outer dome.

2. A hot air register comprising an outer perforated dome rotatably mounted on a vertical spindle, a perforated dome within said outer dome and spaced slightly from it, a sleeve on said spindle to partly support said inner dome, a base jointed to the hot air flue, an inner band on said base below said inner dome, and having spaced vertical slots, damper wings mounted for axial rotation and tapering toward their inner ends, a projection on an outer corner of each wing engaging one of the slots in said band and a finger piece to rotate said band for the purpose specified.

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