E. C. SEAMEN.

Hot-Bed Sash-Ventilators.

No. 216,487. **Patented June 10, 1879.**

FIG. 6

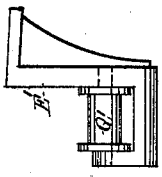


FIG. 5

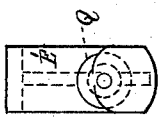
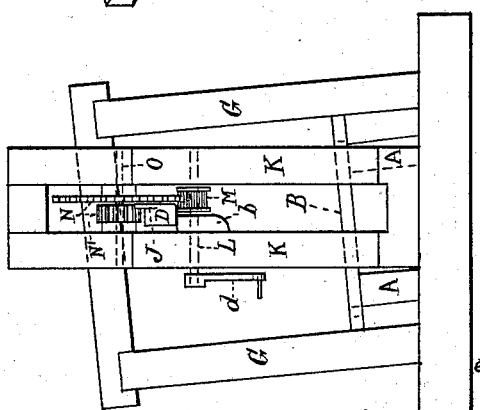


FIG. 1

FIG. 3

FIG. 4

FIG. 2



Witnesses

Thomas J. Beverley

John Haworth

Inventor

Eber C. Seamen

per Stephen Ulrich Attorney

UNITED STATES PATENT OFFICE.

EBER C. SEAMEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES H. VAUTIER, OF SAME PLACE.

IMPROVEMENT IN HOT-BED-SASH VENTILATORS.

Specification forming part of Letters Patent No. **216,487**, dated June 10, 1879; application filed August 23, 1878.

To all whom it may concern:

Be it known that I, EBER C. SEAMEN, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Hot-Bed-Sash Ventilators, of which the following is a specification.

My invention consists in the combination of a reciprocating bar, having dependent brackets at one of its sides, with hangers at its adjacent side, which are projected downward from head-blocks of gallows-frames of the hot-bed frame, and with the connecting-rods of the sashes of the said frame, the brackets of the bar having an offset, for the purpose of clearing hook projections of the hangers of the gallows-frames as they pass them in the reciprocating movements of the bar for raising and lowering the sashes, as hereinafter fully described.

In the accompanying drawings, Figure 1 is an isometrical view of the frame A, for containing a hot-bed, and parts connected therewith. Fig. 2 is an end elevation of the same. Figs. 3 and 4 are a top view and side elevation of the bracket P and friction-roller Q. Figs. 5 and 6 are a front and side elevation of a hanger, E′, having a roller, Q′.

Like letters of reference in all the figures indicate the same parts.

A is a rectangular frame, which incloses a hot-bed. It is covered by means of sectional sashes B, that have any desirable number of panes of glass, C, for the passage of the rays of heat and light from the sun. The sashes are hinged or pivoted at one end to the longitudinal timbers of the frame A, so as to admit of an oscillatory movement, to bring them to a perpendicular position or to any desired angle, and of their being lowered to their fixed position on said frame, thus providing for an expeditious uncovering of the beds for the reception of rain when required, or for the cultivation of the plants, or the gathering of the products, the oscillatory movements of the sashes being effected by means of the sliding bar D, supported by hangers E, confined to the head-pieces of the gallows-frames G, the lower ends of which are confined to side timbers of the bed-frame A. These hangers E are of a hook shape, as represented in the drawings, for the support of the bar at the lower edge, the adjacent side of the bar resting against the corresponding side of the hangers.

The opposite side of the bar is provided with dependent brackets *a*, with which the upper ends of the connecting-rods H of the sashes B are attached. The said brackets *a* have an offset, *e*, to admit of their clearing the hook projections of the hangers E in the reciprocating movements of the bar D for raising and lowering the sashes.

One end of the sliding bar D is provided with a rack, J, and is supported by a bracket, *b*, on one of the vertical timbers of the pedestal K.

L is a driving-shaft, which is provided with a crank, *d*. The shaft is provided with a trundle, M, or a spur-wheel, which gears into the spur-wheel N on the shaft O. N′ is a pinion on said shaft, which gears into the above-mentioned rack. By this gearing a slow motion is communicated to the sliding bar, so as to require only a moderate amount of power for elevating the sashes.

It will be understood that as the sliding bar D is moved in the direction of the arrows by the means just described the connecting-rods H and the fly-edges of the sashes B are drawn upward until the sashes assume a perpendicular or any desired inclined position, and that by a reverse movement of the bar they are returned to their fixed position upon the bed-frame A.

The bracket P, having a friction-roller, Q, (shown in Figs. 3 and 4,) may take place of the bracket *b*, for supporting the rack end of the sliding bar D, the flat side of the bracket in such case being permanently confined to the pedestal; and hangers E′, as shown in Figs. 5 and 6, may take the place of the hanger E, so as to cause the bar D to rest upon the friction-rollers Q′.

Instead of the pivots *d* of the sashes B being placed in bearings *f*, open at top, the bearings may be closed all around them.

I claim as my invention—

1. The combination of the reciprocating bar D, having dependent brackets *a*, with the hangers E and the connecting-rods H, the brackets *a* having an offset, *e*, for clearing the hangers E in the reciprocating movements of the bar, substantially as set forth.

2. The combination of the reciprocating bar D, provided with brackets *a*, with the bracket *b*, hangers E, rods H, and sash-frames B, substantially in the manner and for the purpose set forth.

EBER C. SEAMEN.

Witnesses:
THOMAS J. BEWLEY,
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