

T. W. WEATHERED & A. ENSIGN.
Ventilators.

No. 146,850.

Patented Jan. 27, 1874.

Fig. 1.

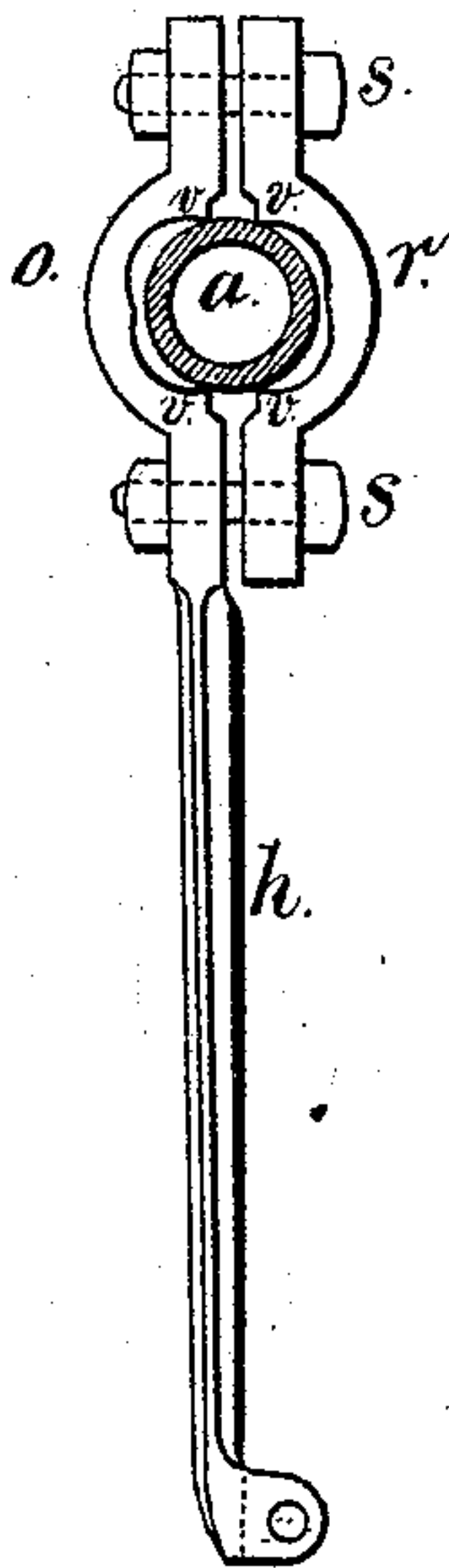
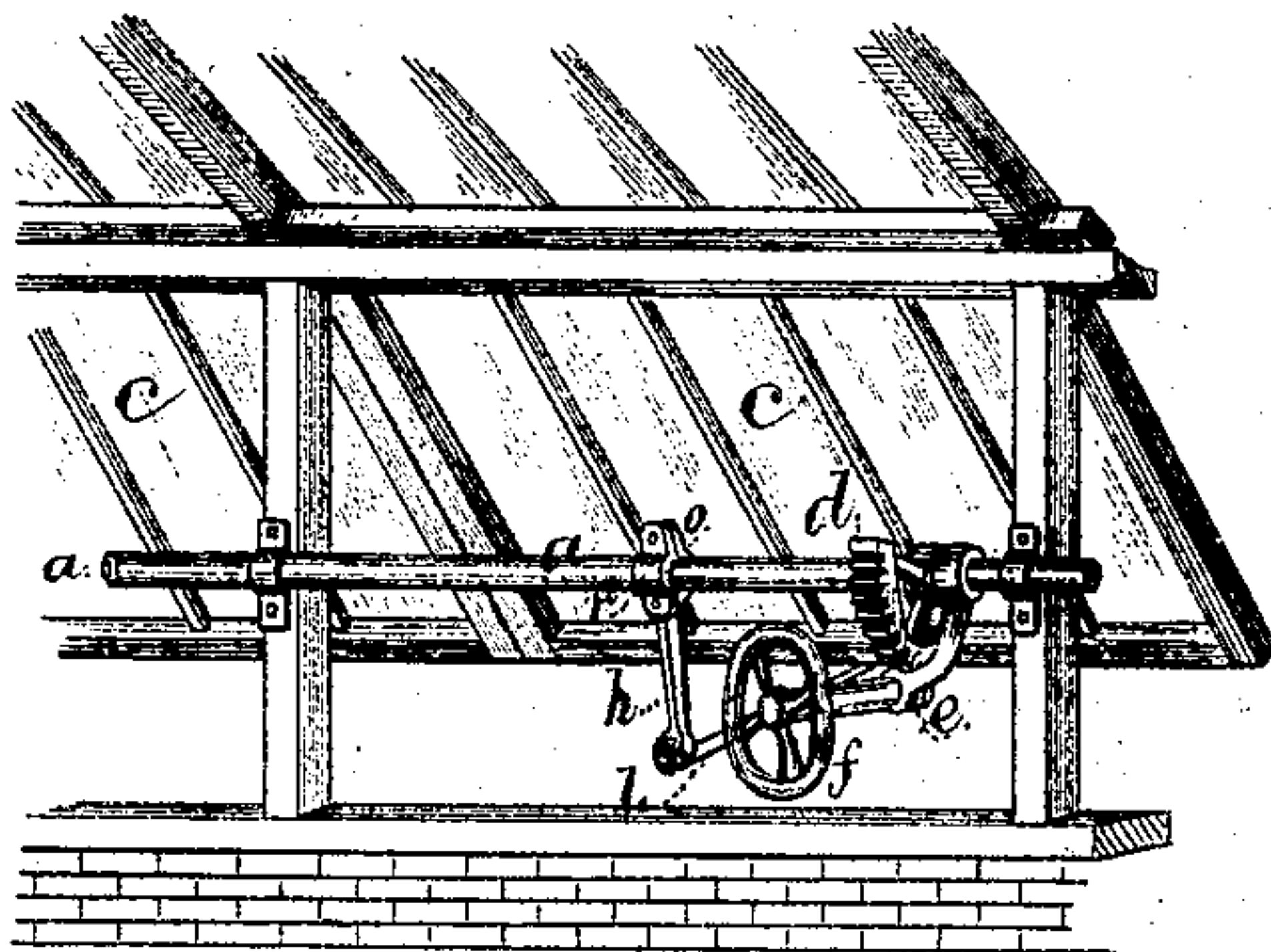


Fig. 2.

Witnesses

Chas H. Smith
Harold Serrell

Inventors
Thomas W. Weathered
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per L. W. Serrell
att'y.

UNITED STATES PATENT OFFICE.

THOMAS W. WEATHERED, OF BROOKLYN, AND ALBINUS ENSIGN, OF NEW YORK, N. Y., ASSIGNORS TO SAID WEATHERED.

IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. **146,850**, dated January 27, 1874; application filed January 3, 1874.

To all whom it may concern:

Be it known that we, THOMAS W. WEATHERED, of Brooklyn, in the county of Kings, and ALBINUS ENSIGN, of the city of New York, State of New York, have invented an Improvement in Ventilators for Greenhouses, &c., of which the following is a specification:

Sashes for ventilating buildings have been hinged at their upper ends, and connected by links to arms attached to a rod or tube running longitudinally of the greenhouse or building, and provided with means for partially revolving such rod or tube, so as to open or close the ventilating-sashes simultaneously. Difficulty is experienced in attaching the arms to these rods or tubes, because the strain and the concussion from wind, and in opening and closing, are apt to loosen a set-screw or key, and prevent all the sashes opening or closing simultaneously and accurately, which, with greenhouses, is of great importance.

Our invention is made for facilitating the construction, adjustment, and repairs of ventilators of the class before mentioned; and consists in a two-part eye to the arm, that serves as a clamp for grasping the longitudinal rod or tube, so as to hold the same in the most firm manner, but at the same time to allow for adjusting the arm with accuracy to properly close the ventilator; and, in case of an arm becoming injured or broken, it can be removed with rapidity by separating the parts of the clamping-eye, and another arm substituted without taking down the longitudinal rod or pipe, as heretofore usual.

In the drawing, Figure 1 is a perspective view of the arm as applied to the ventilators. Fig. 2 is a view, in larger size, of the clamping-eye and tube. The tube or rod *a* is placed

longitudinally of the building, or parallel, or nearly so, to the hinges upon which the ventilator shutters or sashes *c* swing, and this tube *a* is supported in suitable bearings. The segment *d* is attached permanently to the shaft or tube *a*, and it is operated by the worm *e* and handle *f*. These parts are of usual character. The arm *h* and link *l* form toggle-joint connections between the tube *a* and sashes *c*, so that said sashes are opened or closed together by a partial revolution of the tube *a*. The arm or lever *h*, instead of having a solid eye, and being secured to the shaft or tube by a set-screw or key, as heretofore usual, is made with a two-part eye, the portion *o* being cast with the lever, and the portion *r* being a separate clamping-block, secured by the bolts *s*; and within the eye are the ribs *v v*, that serve to clamp and grasp the rod or tube so firmly that there is very little liability to slip; and the arms can be adjusted with great ease and accuracy, so that the ventilators will all close properly; and, in case of injury, the arm can be removed and replaced without disturbing any other parts.

We claim as our invention—

The two-part eye *o r*, with clamping-ribs *v* made at the end of the arm *h* of the ventilator-toggle *h l*, in combination with the longitudinal rod or tube *a*, substantially as and for the purposes set forth.

Signed by us this 29th day of December, A. D. 1873.

THOS. W. WEATHERED.
ALBINUS ENSIGN.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.