

A. W. LOZIER.
Automatic Fan.

No. 215,527.

Patented May 20, 1879.

Fig: 1

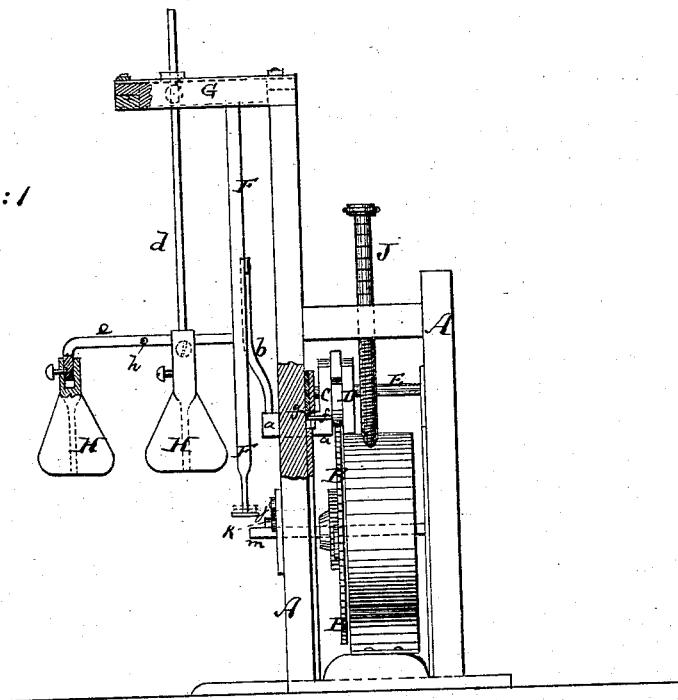


Fig: 3

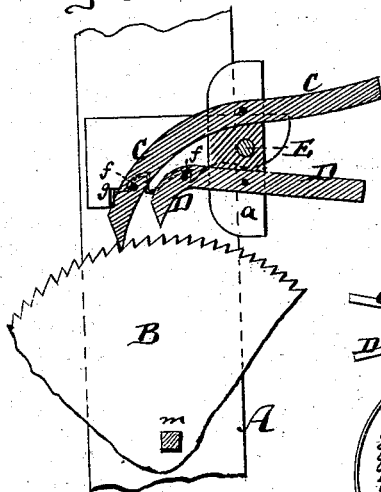


Fig: 4

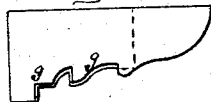
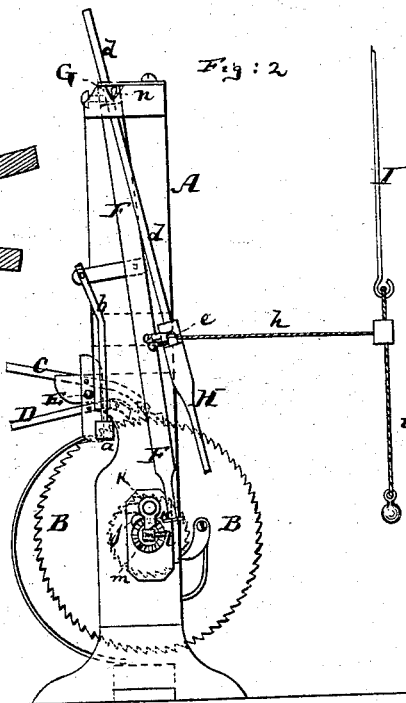


Fig: 2



Witnesses:

John C. Tunbridge.
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Inventor:

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UNITED STATES PATENT OFFICE.

ABRAHAM W. LOZIER, OF NEW YORK, N. Y.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **215,527**, dated May 20, 1879; application filed September 30, 1878.

To all whom it may concern:

Be it known that I, ABRAHAM W. LOZIER, of New York city, county and State of New York, have invented an Improved Fanning Apparatus, of which the following is a specification.

Figure 1 is a side view, partly in section, of my improved fanning apparatus. Fig. 2 is a face view of the same. Figs. 3 and 4 are detail side views, on an enlarged scale, of the actuating-pawls and the cushioned stops for the same.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to several features of improvement in an apparatus for fanning invalids and others; and consists of the new combination and arrangement of parts, hereinafter more fully pointed out.

In the drawings, the letter A represents the frame of the apparatus. This frame carries a suitable spring, which, when wound up, will serve to impart rotary motion to a ratchet-wheel, B.

C and D are two pawl-detents, which are hung in ears that project, respectively, from the upper and lower sides of a rock-shaft, E.

As the wheel B rotates, the pawls C D constitute an escapement and vibrate alternately on their pivots, and as they are vibrated they cause the shaft E to oscillate in its bearings.

A crank, *a*, of the shaft E connects a rod, *b*, with a pendulum-rod, F, which is at its upper end rigidly attached to a rock-shaft, G, which is hung in knife-edge bearings *n*. By this connection with the shaft E the shaft G is vibrated and imparts proper motion to the fans H H, which are connected to it. One of these fans is shown to be swiveled onto a rod, *d*, that extends through the rock-shaft G and is vertically adjustable therein. The other fan H is shown swiveled to a cross-bar, *e*, that projects from the pendulum-rod F, and is vertically adjustable thereon. The rod *d* properly braces the rod *e*.

Being swiveled, the fans can be set on edge whenever it is desired to dispense with their action. They can be adjusted to any suitable height.

When the fans are set on edge the lower end of the pendulum-rod should receive a weight or weights, to compensate for the reduced resistance of the air.

The pawls C D have projecting pins *ff*, which strike a cushion, *g*, during the upward motion of said pawls, thereby reducing the noise of the apparatus.

The cross-bar *e* or the rod F is, by a suitable cord or device, *h*, connected with a suspended frame, I, carrying a series of flies, *i*, which, when set in motion by their connection with the fanning apparatus, will disturb mosquitoes, flies, and other insects, and keep them away from the person to be fanned, whose couch may be placed beneath the rock-shaft G.

To the frame A are pivoted stops *j k*, which can be set in the way of a pin, *l*, that projects from the shaft *m* of the wheel B, so that by said stops the time of rotation of the wheel B may be adjusted with great nicety.

A screw, J, bearing against the body of the mainspring, may also be used as a means for regulating the time during which the apparatus shall remain operative.

I claim—

1. The combination of the pawls C D with their projecting pins *ff* and cushion *g*, substantially as herein shown and described.

2. The combination of the pawls C D with the ratchet-wheel B, and with the rock-shaft E and fanning apparatus connected thereto, substantially as herein shown and described.

3. The combination of the rock-shaft G and pendulum-rod F with the rod *d*, and with the vertically adjustable and swiveled fans H H, substantially as herein shown and described.

4. The combination of the rock-shaft G with the vertical rod *d*, pendulum-rod F, and horizontal rod *e*, all combined substantially as herein shown and described.

The above specification of my invention signed by me this 25th day of September, 1878.

ABRAHAM W. LOZIER.

Witnesses:

T. B. MOSHER,
F. V. BRIESEN.