A. W. PRATHER & D. D. SHIRLEY.

AUTOMATIC FANS.

No. 194,369. Patented Aug. 21, 1877.

Fig. 1.

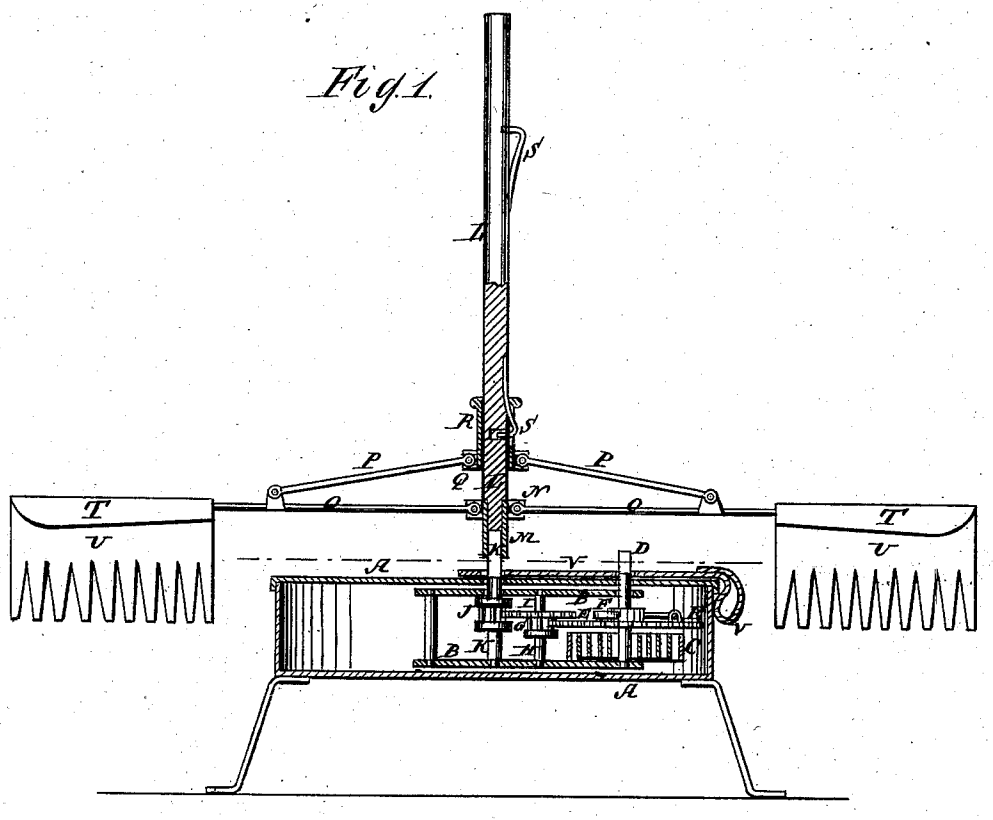
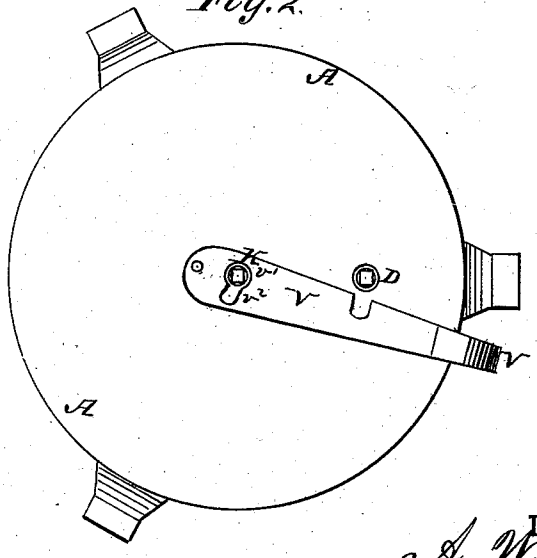


Fig. 2.



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UNITED STATES PATENT OFFICE.

AMOS W. PRATHER AND DAVID D. SHIRLEY, OF LINEVILLE, IOWA.

IMPROVEMENT IN AUTOMATIC FANS.

Specification forming part of Letters Patent No. **194,369**, dated August 21, 1877; application filed July 13, 1877.

To all whom it may concern:

Be it known that we, AMOS WALTER PRATHER and DAVID DAIL SHIRLEY, of Lineville, county of Wayne and State of Iowa, have invented a new and useful Improvement in Automatic Fans, of which the following is a specification:

Figure 1 is a side view of our improved device, partly in section, to show the construction. Fig. 2 is a top view of the same, the fan-shaft and fans being detached.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for agitating the air and driving away flies, which shall be simple in construction, inexpensive in manufacture, and automatic in its action, and which shall be so constructed that it may be placed upon a dining-table, a work-table, a table standing at the side of a sick-bed, or a child's cradle, and upon a soda-water counter, and in any other place where it is desired to drive away flies and agitate the air.

The invention consists in the combination of the shaft, the sleeves, the notched and grooved ring-flanges, the hinged arms, the hinged braces, the catch-springs, and the fan, flag, or brush holders, with each other and with the box and its clock-work; and in the combination of the pivoted lock-bar with the box and with the squared upper part of the shaft of the clock-work, that gives motion to the shaft that carries the fans, as hereinafter fully described.

In the drawing, A represents a box, which may be made of any desired shape and size, and of any suitable material. Within the box A is secured a frame, B, to which is attached one end of the spring C. The spring C is coiled around, and its other end is attached to a shaft, D, which revolves in bearings in the frame B, and upon which is placed a large gear-wheel, E. The gear-wheel E is connected with the shaft D by a pawl and ratchet, F, so that the wheel E may be carried around by and with the shaft D, when it is turned by the uncoiling of the spring C, and so that the said shaft D may be turned to coil up the spring C without turning the wheel E. The upper end of the shaft D projects through the top of the box A, and is squared off to receive a key for turning it to wind up the spring C.

The teeth of the gear-wheel E mesh into the teeth of the small gear-wheel G attached to the shaft H, the journals of which are pivoted to the frame B. To the shaft H is also attached a large gear-wheel, I, the teeth of which mesh into the teeth of the small gear-wheel J, attached to the shaft K. The shaft K is pivoted to the frame B, and its upper end projects through a hole in the top of the box A, and is squared off to fit into a square socket formed in or attached to the lower end of the shaft L. The shaft L may be of any desired height, and to its lower end is attached a sleeve, M, having a ring-flange, N, formed around or attached to it, which is notched to receive the ends of the arms O, and is grooved to receive the wire by which said ends are secured and hinged to said flange N. To the middle parts of the arms O are hinged the ends of the braces P, the other ends of which are hinged to a notched and grooved flange, Q, attached to or formed upon the sleeve R that slides up and down upon the shaft L. To the shaft L is attached a number of catch-springs, S, to catch upon the sleeve R and hold it in various positions. The sleeve R is also slotted to receive the catch-springs S, so that each spring may hold the sleeve R in two positions.

To the outer parts of the arms O are attached clamps or holders T, which may be made of any desired form or size. In the drawings the holders T are represented as being made of strips of sheet metal, having their middle parts bent around the said arms, and their side parts projecting parallel with each other, or nearly so, to receive and hold a flag, fan, or brush; but I do not limit myself to this construction. This construction enables the fans to be adjusted at various heights, as the purpose for which the device is to be used may require. The rapidity of motion may also be regulated by adjusting the fans at different heights, and thus varying the resistance.

The length of time during which the device will run may be increased by increasing the length and power of the coiled spring, and the number of gear-wheels in the train.

V is a bar, the inner end of which is pivoted to the top of the box A, a little at one side of

its center, and which has a hole, v', formed through it near its pivoted end, through which the square upper part of the shaft K passes and revolves freely. In the bar V, at one side of the hole v^1, is formed a notch, v^2, large enough to receive the squared upper part of the shaft K, but not large enough to allow said shaft to revolve within it, so that the motion of the fans may be stopped by adjusting the bar V to bring the shaft K within the notch v^2, and by moving the bar V to bring the shaft K into the hole v^1 the fans will be again allowed to revolve. The end of the bar V may project beyond the box A, so that it may be readily grasped and operated to stop and start the rotation of the fans.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of the shaft L, the sleeves M R, the notched and grooved ring-flanges N Q, the hinged arms O, the hinged braces P, the catch-springs S, and the fan, flag, or brush holders T, with each other and with the box A and its clock-work, substantially as herein shown and described.

2. The combination of the pivoted lock-bar V with the box A, and with the squared upper part of the shaft K of the clock-work that gives motion to the shaft L, which carries the fans, substantially as herein shown and described.

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