

*Harrell & Hall,*

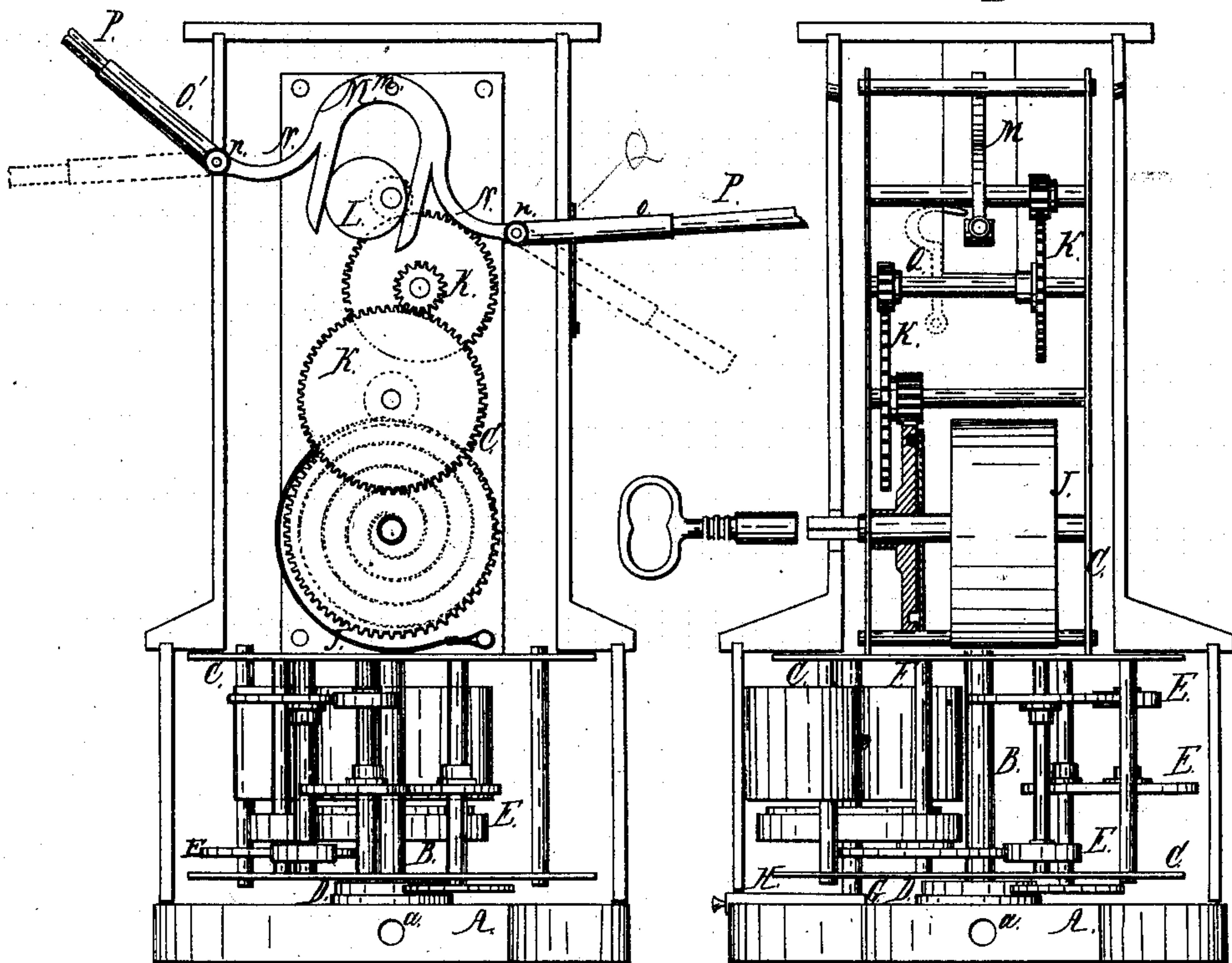
*Automatic Fan,*

*Nº 69,802,*

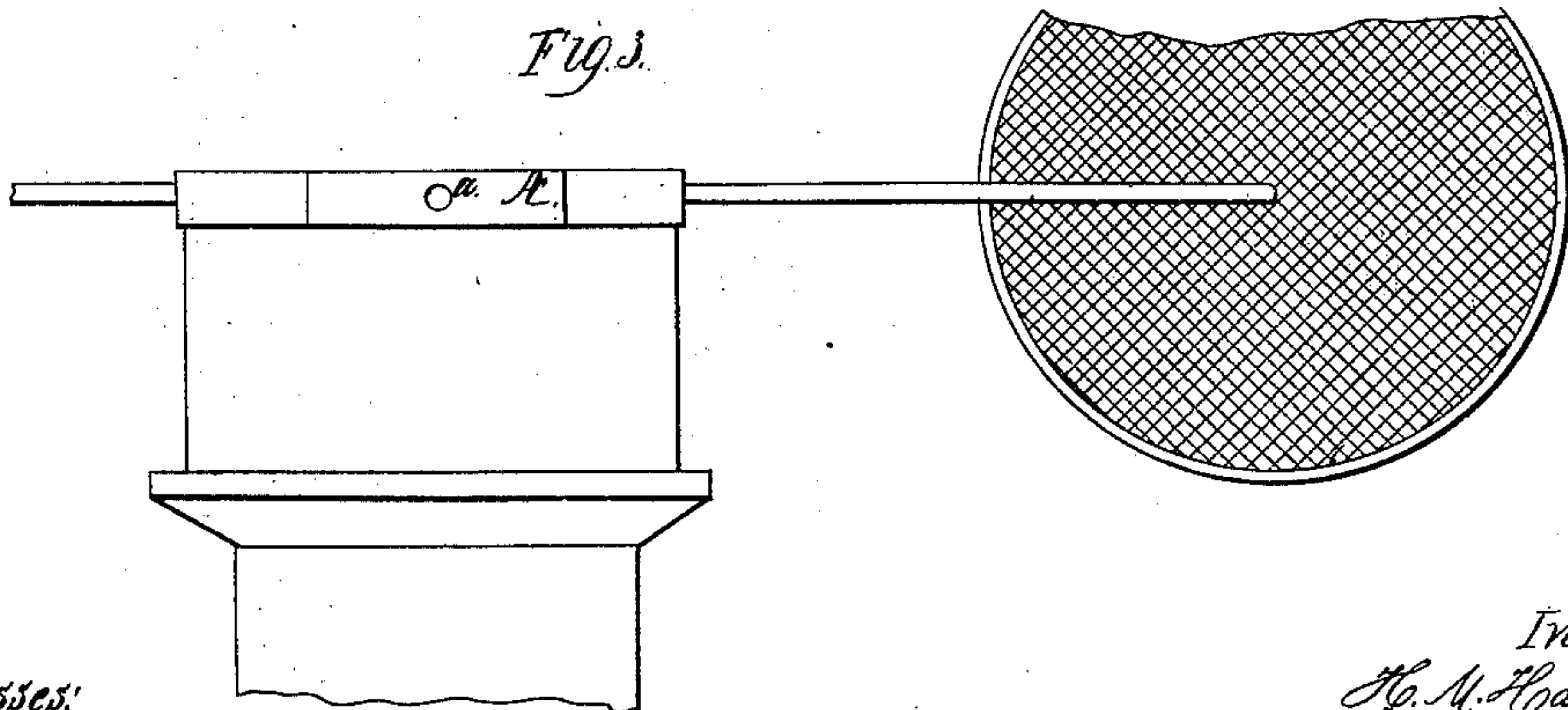
*Patented Oct. 15, 1867*

*Fig. 1*

*Fig. 2.*



*Fig. 3.*



*Witnesses:*  
*Oscar Hase,*  
*Fred Bauhaus*

*Inventor*  
*H. M. Hall*  
*W. D. Harrell*  
*By Knight & Co.*

# United States Patent Office.

WILLIAM D. HARRELL AND HARRY M. HALL, OF OSGOOD, INDIANA.

*Letters Patent No. 69,802, dated October 15, 1867.*

## IMPROVED SELF-ACTING FLY-FAN.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO WHOM IT MAY CONCERN:

Be it known that we, WILLIAM D. HARRELL and HARRY M. HALL, both of Osgood, Ripley county, Indiana, have invented a new and useful Fly-Fan; and we hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification

Our invention relates to a device for working one or several fans, for the purpose of creating a current of air and driving away insects.

Figure 1 is a front elevation of a machine embodying our improvements.

Figure 2 is a side elevation of the same.

Figure 3 is a partial elevation, showing our machine inverted for a simply rotary motion.

Upon the centre of a base, A, is erected a stud-shaft, B, for a revolving frame, C. Affixed concentrically to the said stud-shaft, or to said base, just below the revolving frame C, is a spur-wheel, D, which, through suitable gearing E, connected to a main-spring, F, causes the revolution of the said frame and its appurtenances when the spring is wound. G is a square arbor for winding up the spring. H is a sliding-bolt for stopping the rotation of the frame C when desired. This bolt being pushed inward, arrests the rotation of the frame C by impingement of the said stop with the arbor G. The base A has one or more holes or sockets *a* for the insertion of the stems of as many fans I, when the machine is used in what we term its inverted position, (see fig. 3.) The upper portion of the frame C affords journal bearing for another spring, J, which, through the medium of suitable gearing K journalled in said frame, rotates an eccentric, L, which causes the vibration of a yoke, M, having projecting arms N N', to which sockets O O', for as many fan-stems P P', are united by rather stiff hinge-joints *n*, so the fans can be adjusted to a greater or less degree of elevation or depression, (see red lines fig. 1.) The yoke is suspended to the frame by a shaft, *m*. Q is a hook pivoted to the frame, and whose engagement over one of the arms N arrests, when desired, the vibration. It will be seen that the fans can be set to either an elevated or depressed position, and either vibrated without rotating, or rotated without vibrating, or both rotated and vibrated at pleasure. Also the fans, being set with planes at a greater or less obliquity with their plane either of vibration or of rotation, avail themselves of the atmospheric resistance to modify or control the velocity of either of these distinct motions.

We claim herein as new, and of our invention—

1. The arrangement of base A, stud-shaft B, and revolving frame C, furnished with two distinct sets of clock-work for reciprocating and horizontally rotating motion of one or more fans, either singly or combined as set forth.

2. The provision of the hinged connections of the fan-arms for the purpose stated.

3. In combination with the subject of the first clause, we claim the stops H and Q for arresting the rotary and vibrating motions of the fans, either jointly or severally.

In testimony of which invention we hereunto set our hands.

W. D. HARRELL,  
H. M. HALL.

Witnesses:

ROBERT E. HALL,  
WM. WILL.