

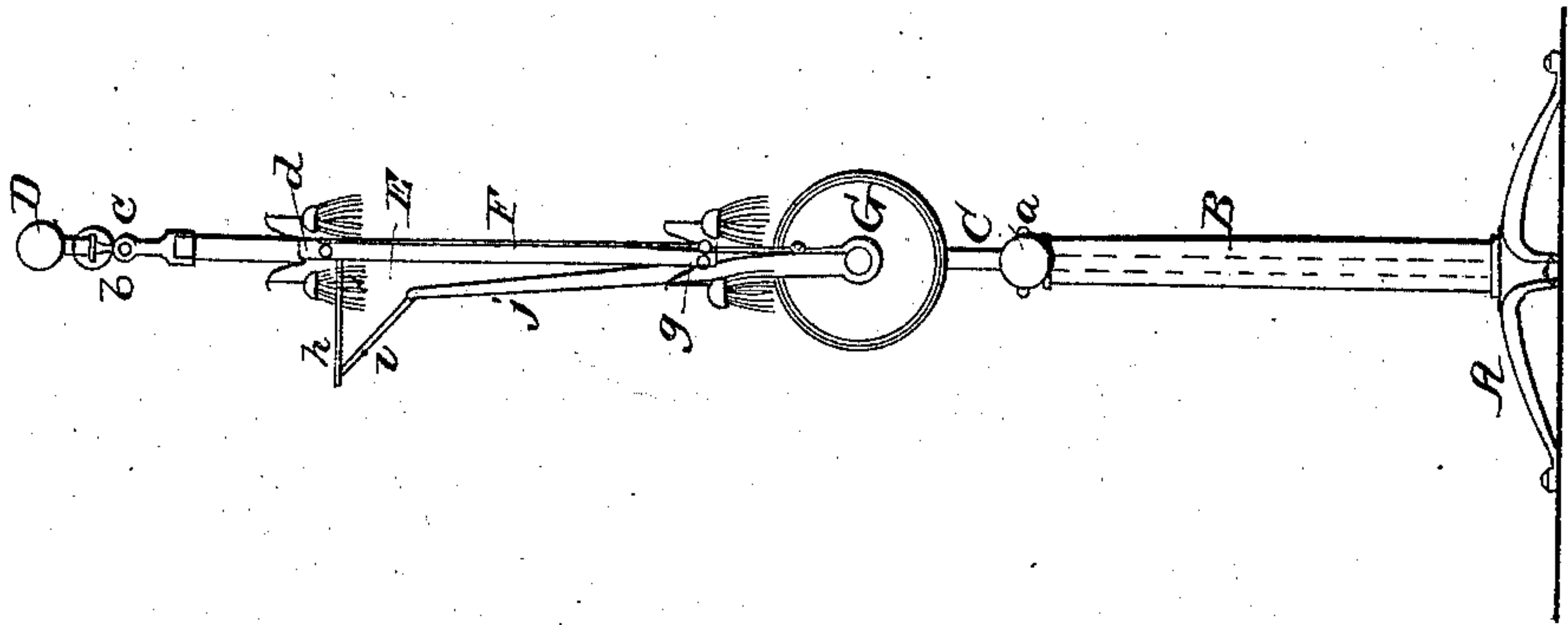
*W. D. Loeffler,*

*Automatic Fan.*

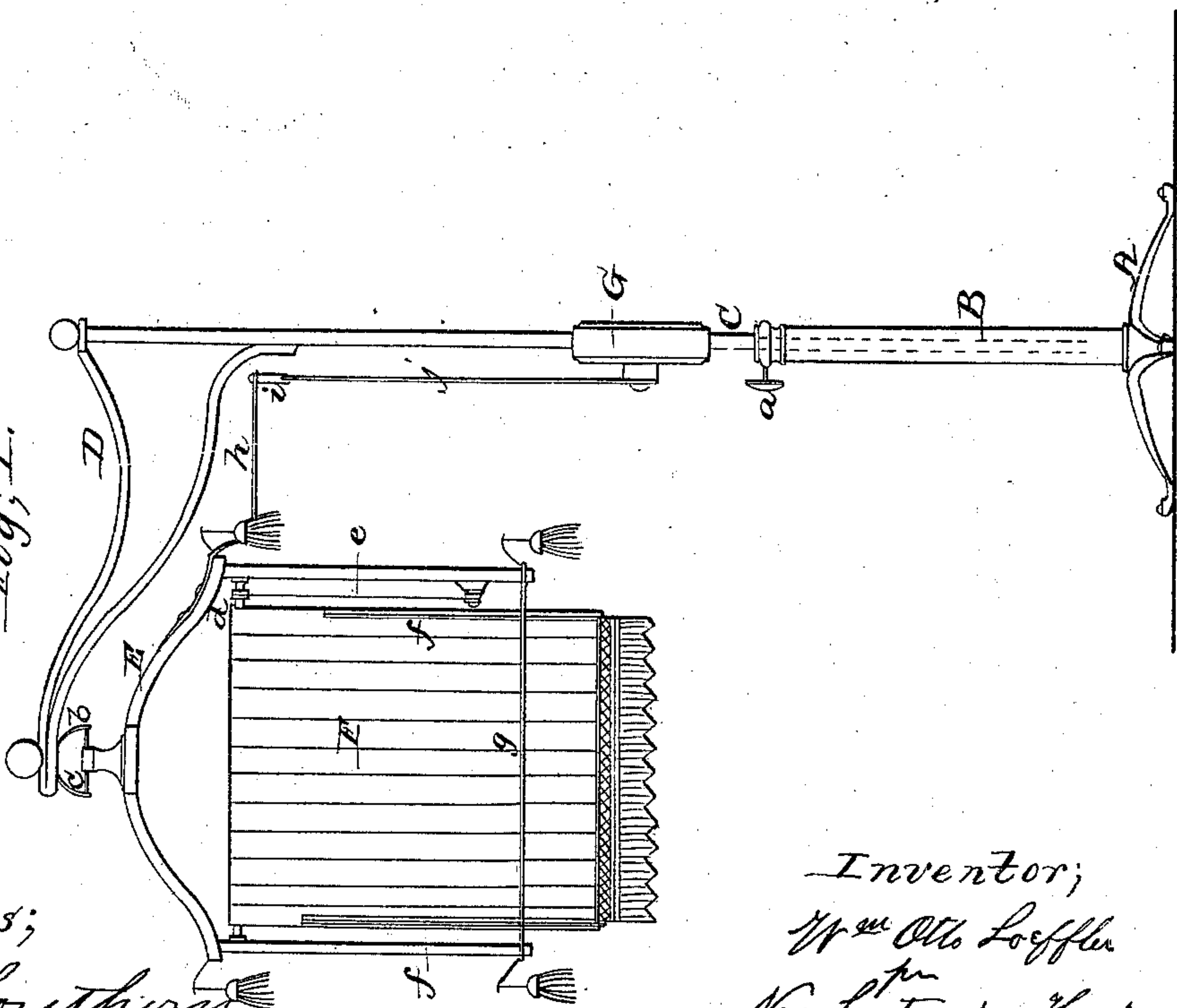
*N<sup>o</sup> 66,507*

*Patented July 9, 1867.*

*Fig. 2.*



*Fig. 1.*



*Witnesses;*  
*Geo. J. Southern*  
*Gustav Berg*

*Inventor;*  
*Wm. Otto Loeffler*  
*per*  
*Wm. Santownd, Knapp*  
*Att'y*

# United States Patent Office.

WILLIAM O. LOEFFLER, OF NEW YORK, N. Y.

*Letters Patent No. 66,507, dated July 9, 1867.*

## IMPROVED AUTOMATIC FAN.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM OTTO LOEFFLER, of New York, in the county and State of New York, have invented a new and improved Automatic Fan; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a sectional front elevation of this invention.

Figure 2 is a transverse section of the same.

Similar letters indicate corresponding parts.

This invention relates to a fan, which is composed of a curtain hung in a frame, to which an oscillating motion can be imparted by a clock movement or other suitable power. The edges of the curtain are rendered stiff by means of slats, which are secured in the same, and which are guided in a slotted cross-bar of the oscillating frame in such a manner that when the curtain is lowered it still preserves its stiffness, and that the effective area of the fan can be increased or diminished at pleasure. The motion of the clock movement or other mechanism is transmitted to the fan-frame by means of a rocking-lever, which connects by a cord or flexible band with an angular arm extending from the fan-frame in such a manner that an impulse is imparted to the fan-frame, whenever the rocking-lever moves in one direction, while the fan-frame swings independent of the rocking-lever in the opposite direction, and thereby the operation of the fan by a clock movement or other similar mechanism is rendered practicable. The arm from which the fan-frame is suspended extends from a vertical rod to which the clock movement or other driving mechanism is attached, and which is adjustable in a column or socket so that the fan can be turned in either direction, or that it can be raised or lowered as occasion may require.

A represents a stand made of cast iron or any other suitable material, from which rises a column, B, which is bored out to receive the rod C, this rod being so arranged that it can be turned in either direction and raised or lowered to suit convenience. A set-screw, *a*, serves to secure said rod in the required position. From the top end of the rod C extends an arm, D, which may be rigid, or which may be so constructed that it can be lengthened and shortened. The end of this arm supports a stirrup, *b*, which forms the bearings of a pin, *c*, from which is suspended the fan-frame E in such a manner that an oscillating or pendulum motion can be imparted to it. F is the fan, which is made on the principle of a curtain. It rolls upon a roller, *d*, which has its bearings in the side rails of the frame E, and which can be turned by pulling a cord, *e*, stretched over two pulleys, one of which is secured to the end of said roller, and the other to the inside of the side rail of the frame, as shown in fig. 1. The edges of the fan F are stiffened by slats *f*, the length of which is equal to or a little in excess to that of the side rails of the frame E, so that when the fan is wound up on the roller *d*, until the upper ends of the slats strike said roller, the lower ends of the slats will extend through a slotted cross-bar, *g*, which connects the ends of the side rails of the frame E. By means of the slats *f*, and of the slotted cross-bar *g*, the fan is prevented from swaying to and fro independent of the frame, and its effect in producing a current of air is materially improved; and, furthermore, if the fan is lowered, it is still retained by the slotted cross-bar, and its effective surface can be increased or diminished as circumstances may require. If desired, the fan-frame, together with the fan, may be so constructed that it can be made wider or narrower, or a wide frame may be suspended at its opposite ends from two stands, so as to have the fan extend across a table or bedstead, and to produce a current of air of sufficient magnitude to be felt simultaneously by several persons. From the frame E extends an angular arm, *h*, which connects by a cord or flexible band, *i*, with a lever, *j*, to which a rocking motion is imparted by a clock movement, G, or any other suitable mechanism, which is attached to the rod C, so that it will retain its proper position in relation to the frame E, whatever the position of the rod C may be. By making the connection between the lever *j* and arm *h* flexible, an impulse is imparted to the frame E, while the rocking-lever moves in one direction, while said frame is free to swing in the opposite direction independent of the rocking-lever, and thereby the use of a clock movement or other equivalent mechanism in connection with the oscillating frame, is rendered practicable, which is not the case if the connection between the rocking-lever and the fan-frame is made rigid, since in that case the motion of said frame is limited and liable to check and counteract the motion of the driving mechanism.



By my improvement a fan is obtained which can be readily adjusted in any desired position, which can be easily driven by a clock movement or other equivalent mechanism, and which can be used over tables, bedsteads, desks, or in any place where it is desirable to create a current of air.

What I claim as new, and desire to secure by Letters Patent, is—

1. The fan *F*, in combination with the roller *d* and oscillating frame *E*, constructed and operating substantially as and for the purposes set forth.
2. The slats *f* and slotted cross-bar *g*, in combination with the fan *F* and oscillating frame *E*, constructed and operating substantially as and for the purpose described.
3. The flexible connection *i*, in combination with the oscillating frame *E* and rocking-lever *j*, constructed and operating substantially as and for the purpose set forth.

WILLIAM OTTO LOEFFLER.

Witnesses:

W. HAUFF,

GEO. F. SOUTHERN.