

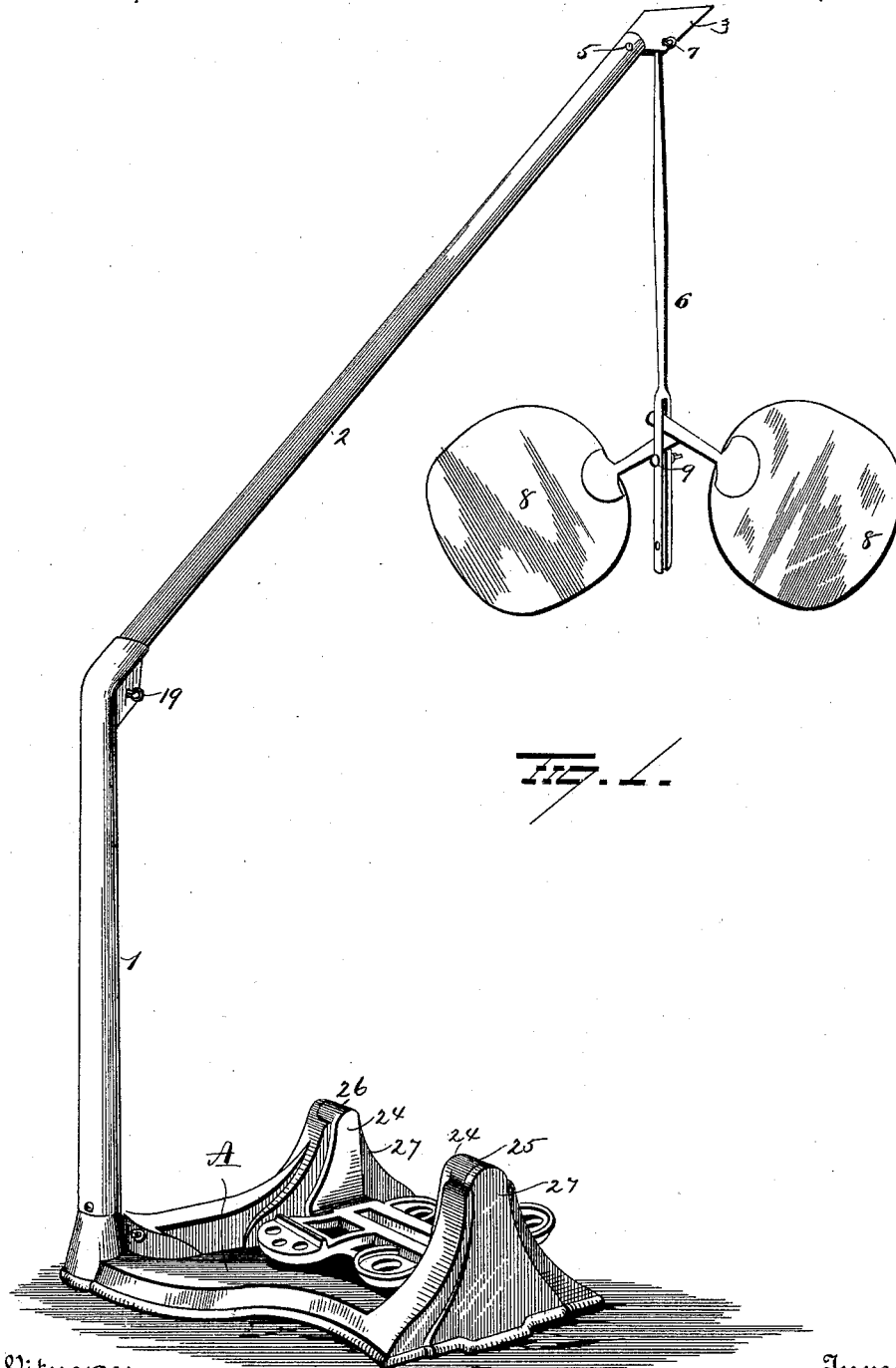
(No Model.)

2 Sheets—Sheet 1.

W. H. CURTICE.
PORTABLE FAN.

No. 422,737.

Patented Mar. 4, 1890.



Witnesses
E. A. Whigham
G. J. Downing

Inventor
Wm H Curtice

By his Attorney
W. A. Simpson

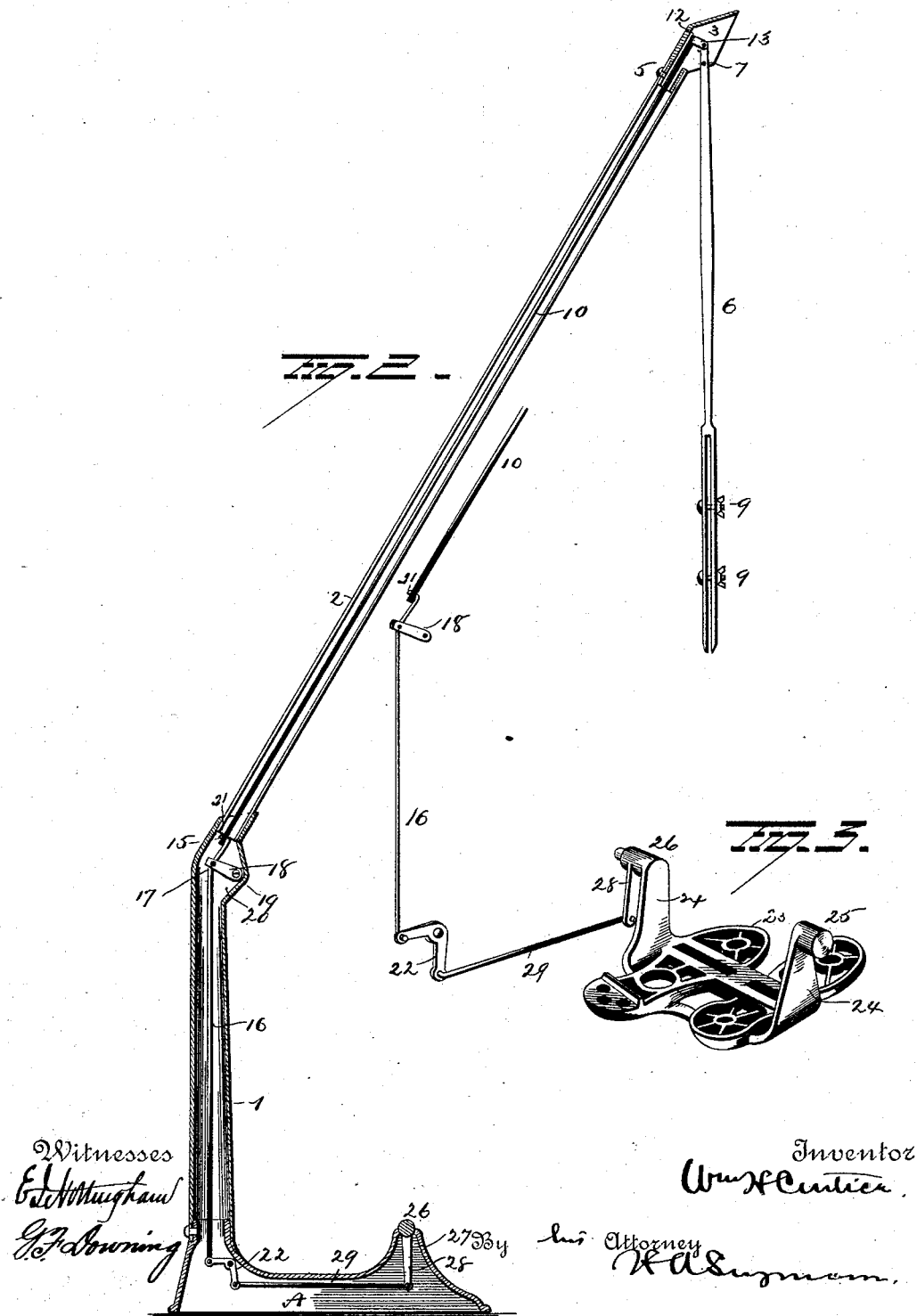
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E. H. Mingham
G. J. Downing

Inventor
W. H. Curtice

his Attorney
H. A. Sugman

UNITED STATES PATENT OFFICE.

WILLIAM H. CURTICE, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO THE PORTABLE FAN COMPANY, OF SAME PLACE.

PORTABLE FAN.

SPECIFICATION forming part of Letters Patent No. 422,737, dated March 4, 1890.

Application filed May 7, 1889. Serial No. 309,869. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CURTICE, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Portable Fans; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in fans, and particularly to the construction embodied in my pending application, Serial No. 294,485.

The object is to construct a fan more especially designed for dining-room or bed-room use to effectually perform the functions usually pertaining to fans, capable of being operated with slight exertion, and without occasioning the disagreeable rattling noise which sometimes accompanies the use of foot-power fans.

A further object is to provide a neat-appearing fan which may be easily taken apart and put together, consisting of few parts, and that may be placed on the market at a slight cost.

With these ends in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective. Fig. 2 is a vertical section through the upright, showing the levers and the connecting-rods; and Fig. 3 is a detached view of the treadle.

A represents the base, upon which the entire mechanism is supported. This base is preferably made of cast metal in the general shape shown, it being finished off to give it a neat appearance and hollowed out on its under side and cut away through the center, if desired, to make it as light as possible. At one end of the base the hollow upright 1 is secured. It extends upward to about the height of an ordinary table, and at its upper end is bent backward at about an angle of forty-five degrees. This end furnishes a socket for the removable section of piping 2, one end of which is inserted into the bent end of the hollow upright 1. The section 2, being straight,

extends backward on an incline over the base, its length being sufficient to reach from one end of an ordinary-sized extension-table to its middle. A spear-shaped sheath 3 is rounded at one end for insertion into the outer end of the section 2, wherein it is preferably held by a set-screw or similar device 5. The sheath is made hollow to receive certain parts of the operating mechanism to which the fan is attached.

The vibrating arm 6, which carries the fans, is fulcrumed upon a removable key or pin 7 in this sheath at a short distance from one of its ends. At its outer end 7 this vibrating arm 6 is split for some distance at right angles to its line of vibration, and the handles of the fans 8 8 are held in this split end by means of bolts or screws 9 9, which latter are loosened or unscrewed to allow the split ends to part to receive the handles, and tightened after the handles have been placed between them to hold them fast. Two or more fans may be employed to good advantage, and they are so placed as to extend in opposite directions.

Rod 10 extends loosely through the pipe-section 2 and into the sheath 3. At this end the rod is furnished with a ferrule 12, or device of similar character, which has a pair of ears 13 13 extending out on one side, between which the short end of the vibrating arm 6 is pivoted. The ears project out sufficiently far so that the vibrating arm may swing close to the pipe-section without obstruction. The opposite end of the rod 10 is provided with a hole 15. Pitman 16, extending through the hollow upright 1, is bent at point 17, near its upper end, to conform in shape to the bend in the upper end of the upright, and at this point the pitman is pivotally supported on one end of a rocking arm 18, the opposite end of which is pivoted on a removable pin or key 19 in the V-shaped recess 20, formed at the bend in the upright. The object of the rocking arm 18 is to guide the pitman in its endwise movement around the bend in the pipe, so that it will not touch the interior of the hollow upright through which it moves. This pitman is bent backward at its extreme upper end to form a hook 21, accessible when section 2 is disconnected, and said hook is

adapted to enter the hole 15 in the end of rod 10, and in this manner effect a suitable coupling. Bell-crank lever 22 is pivoted to the upright, and one end of this lever is connected

5 with the lower end of the pitman 16.

The rocking treadle 23 is provided with arms 24 24, on the ends of which trunnions 25 and 26 are formed. These trunnions are supported in the elevated bearings 27 27 on the base, so that the treadle rocks below its support where the ankle motion necessary to operate it is lessened and almost entirely dispensed with and the motion is derived from the knee instead. A lever 28 projects downward from trunnion 26 into the base, about parallel with the arms 24 24, to a point preferably a little above the axis of the treadle. A connecting-rod 29 extends from this lever to one end of the bell-crank lever 22, and through it rocking motion is communicated to the latter.

Owing to the fact that the lever 28 is shorter than the arms 24 24, greater leverage is obtained than would result if the lever were longer, for in this case the power is brought close to the fulcrum.

The operation is very simple. The operator usually sits at the end of the table, with one or both feet upon the treadle. By rocking the treadle back and forth the lever 28 is swung and this imparts a reciprocating motion to the connecting-rod 29, which in turn rocks the bell-crank lever 22. The latter raises and lowers the bent pitman 16, the rocking arm 18 guiding it around the bend, and the pitman reciprocates the rod 10, which latter vibrates the fan-arm.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the particular construction herein set forth; but,

45 Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fan, the combination, with a base, an upright supported thereon, this upright having a bent upper end, and a removable pipe-section secured to the upright, of a vibrating fan-supporting arm fulcrumed at the outer end of the pipe-section, a rod extending through the latter and connected with the arm,

a bent pitman in the upright connected with the rod, an arm pivotally connecting the pitman with the upright at the points where both are bent for guiding the pitman in its endwise movement around the bend, and a treadle for reciprocating the pitman, substantially as set forth.

2. In a fan, the combination, with a bent hollow support, a pitman located within the support and conforming in shape thereto, and an arm pivotally connecting the pitman with the support at the point where both are bent for guiding the pitman in its endwise movement around the bend, of a treadle for actuating the pitman and a vibrating fan-supporting arm actuated by the pitman, substantially as set forth.

3. In a fan, the combination, with a base, an upright supported thereon, this upright having a bent upper end, and a removable pipe-section socketed in the upright, of a vibrating fan-supporting arm, the latter being split at its free end at right angles to the line of vibration, fans held therein, a rod extending through the pipe and connected with the arm, a bent pitman in the upright connected with the rod, an arm pivotally connecting the pitman with the upright at the point where both bend for guiding the pitman in its endwise movement around the bend, and a treadle, connecting-rod, and bell-crank lever for reciprocating the pitman, substantially as set forth.

4. The combination, with a base, hollow upright bent at its upper end, a removable pipe-section socketed in the upright, and a hollow sheath removably secured to the end of the pipe-section, of a rod located in the latter, a vibrating fan-supporting arm fulcrumed in the sheath and pivoted to the rod, a bent pitman extending through the bent support and connected with the rod, a rocking arm pivoted within the support and to the pitman, a rocking treadle, a lever thereon, a bell-crank lever connected to the pitman, and a connecting-rod extending from the bell-crank lever to the lever on the treadle, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM H. CURTICE.

Witnesses:

C. S. DRURY,
V. E. HODGES.