

H. SURGEONER.

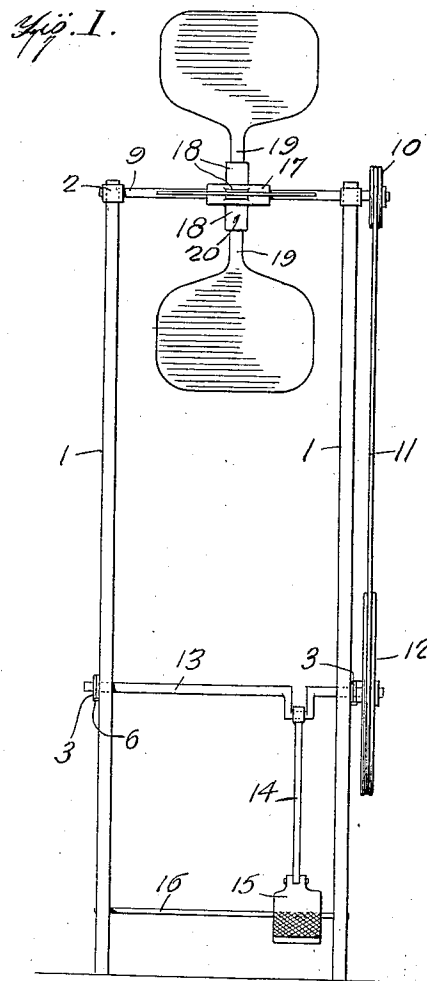
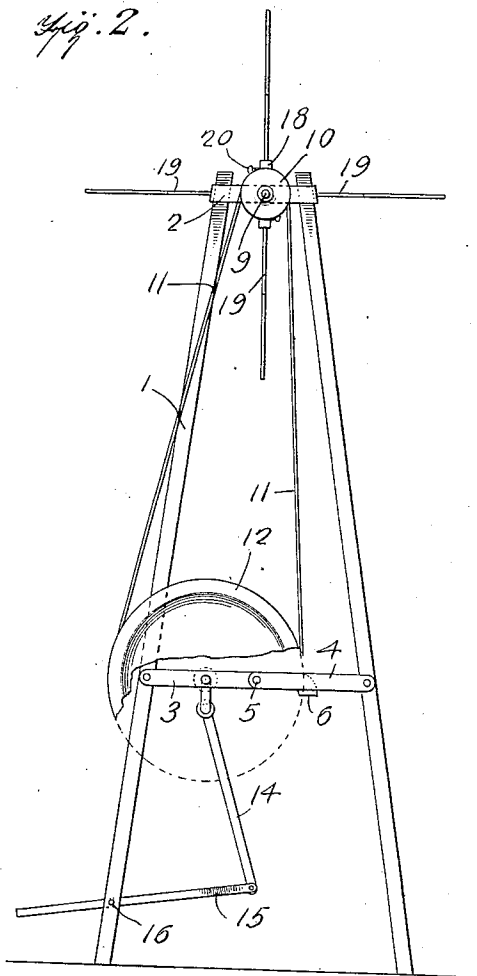
FAN.

APPLICATION FILED APR. 20, 1912.

1,042,169.

Patented Oct. 22, 1912.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

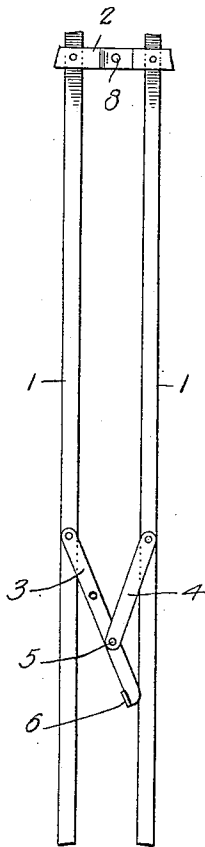


Fig. 4.

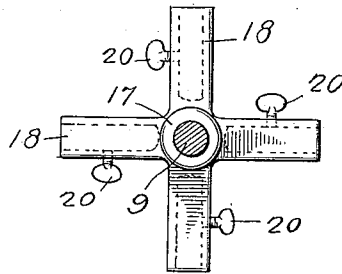


Fig. 5.

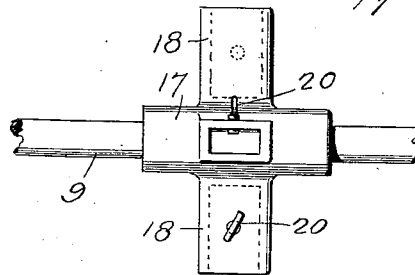


Fig. 6.

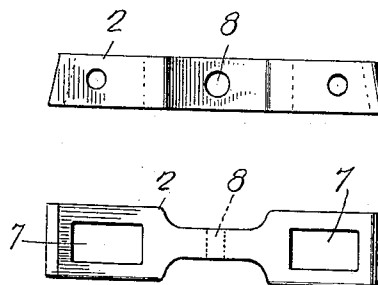


Fig. 7.

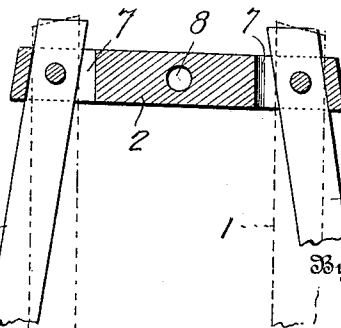


Fig. 8.

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UNITED STATES PATENT OFFICE.

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1,042,169.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed April 20, 1912. Serial No. 692,021.

To all whom it may concern:

Be it known that I, HUGH SURGEONER, a citizen of the United States, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Fans, of which the following is a specification.

This invention provides a mechanism for cooling the air in warm weather by setting up a circulation and has for its object the provision of an appliance which may be operated by foot and which when not required for service may be folded into compact form for convenience of storing so as to be out of the way.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claims.

Referring to the drawings, forming a part of the specification, Figure 1 is a front view of a fan embodying the invention. Fig. 2 is a side view of the fan as it appears when set up for use. Fig. 3 is a side view of the frame when folded and stripped of the operating parts. Fig. 4 is an end view of the fan support showing the shaft in section. Fig. 5 is a front view of the fan support and part of the shaft. Fig. 6 is a side view of one of the castings for connecting the upper ends of the legs. Fig. 7 is a top view of the casting. Fig. 8 is a longitudinal section of the casting, the full lines showing the position of the legs when spread and the dotted lines showing the position of the legs when folded.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The appliance comprises a full framework, a treadle mechanism and a shaft provided with fans. The framework embodies four legs which are pivotally connected at their upper ends to castings 2. When the framework is set up the legs 1 are spread at their lower ends. Folding braces limit the spread of the legs and each brace consists of two members 3 and 4, which are pivotally connected to each other at 5 and have their outer ends pivotally connected to the legs. The member 3 projects beyond the pivot connection 5 so as to overlap the member 4 and has a lateral extension 6 arranged to engage

the lower edge of the member 4 so as to limit the upward movement of the brace members when extended. When the legs are folded the brace members 3 and 4 break joint and swing downwardly.

The two legs upon each side of the framework are pivotally connected at their upper ends by means of the castings 2, which have elongated openings 7 in opposite ends, the inner walls of said openings being vertical and the outer walls inclined to conform to the inclination of the legs 1 when spread. The openings 7 are of a length to permit of the legs 1 opening and closing. When the legs are folded their upper ends engage the inner walls of the openings 7 and when the legs are spread their upper ends engage the inclined ends of the openings 7. Each of the castings has a central opening 8 which forms a bearing to receive a shaft 9. One end of the shaft 9 projects and receives a grooved pulley 10. A drive belt 11 passes around the pulley 10 and around a pulley 12 secured to the projecting end of a shaft 13, which is mounted in the members 3 of the leg braces. The pulley 12 is detachably fitted to the projecting end of the shaft 13 so as to be laid aside in compact form when the device is folded and not required for immediate use. The shaft 13 has a crank portion which is connected by means of a pitman 14 with a treadle 15 mounted upon a rod 16 supported at its ends in opposite legs.

When the device is set up for use the drive belt 11 is under tension, the leg braces being prevented from breaking joint outward by the lateral extensions 6 in the manner herein stated. When the device is folded the drive belt is removed and the members of the leg braces break joint downwardly, the pulley 12 being removed from the shaft 13 to admit of reducing the size of the framework to the smallest amount possible.

A holder is secured to the shaft 9 and is adapted to receive a number of fans. This holder consists of a hub 17 and arms 18, the latter having openings extending inwardly from the outer ends thereof to form sockets in which the stems of fans 19 are inserted, said fans being retained in place by means of set screws 20, which are threaded into openings formed in the sides of the arms 18. The fan holder may be moved to any position in the length of the shaft 9 and secured

in the located position by means of a set screw. The fans 19 may be adjusted to throw a current of air in the desired direction.

5 From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which
10 the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof, I desire to have it understood that the de-
15 vice shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention what
20 is claimed as new, is:—

1. In a fan the combination of folding legs, braces for securing the legs when spread, each of the braces comprising pivotally connected members, one of the members
25 being extended beyond the pivot connection and having a lateral extension to engage the other member to hold the members in alignment, a shaft mounted upon the framework and provided with fans, a shaft mounted in
30 corresponding members of the leg braces, means for transmitting motion from the last mentioned shaft to the fan shaft, and means

for operating the shaft mounted in the said braces.

2. The herein described fan comprising 35 two castings having elongated openings in their ends and round openings intermediate of their ends, the inner walls of the elongated openings being vertical and the outer walls inclined, legs having their upper ends 40 inserted in the openings of the castings and pivoted therein, braces connecting the lower portions of the legs, each of the braces consisting of pivoted members, one of the mem- 45 bers having an end portion extended and provided with a lateral extension to engage under the other member, a shaft having a crank portion mounted in one of the members of the braces, a treadle having connection with said shaft, a pulley detachably 50 fitted to a projecting end of the shaft, a second shaft mounted in the central openings of the castings, a pulley mounted upon a projecting end of the second shaft, a drive 55 belt connecting the two pulleys, a holder mounted upon said second shaft, and fans having adjustable connection with said holder.

In testimony whereof I affix my signature in presence of two witnesses.

HUGH SURGEONER.

Witnesses:

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