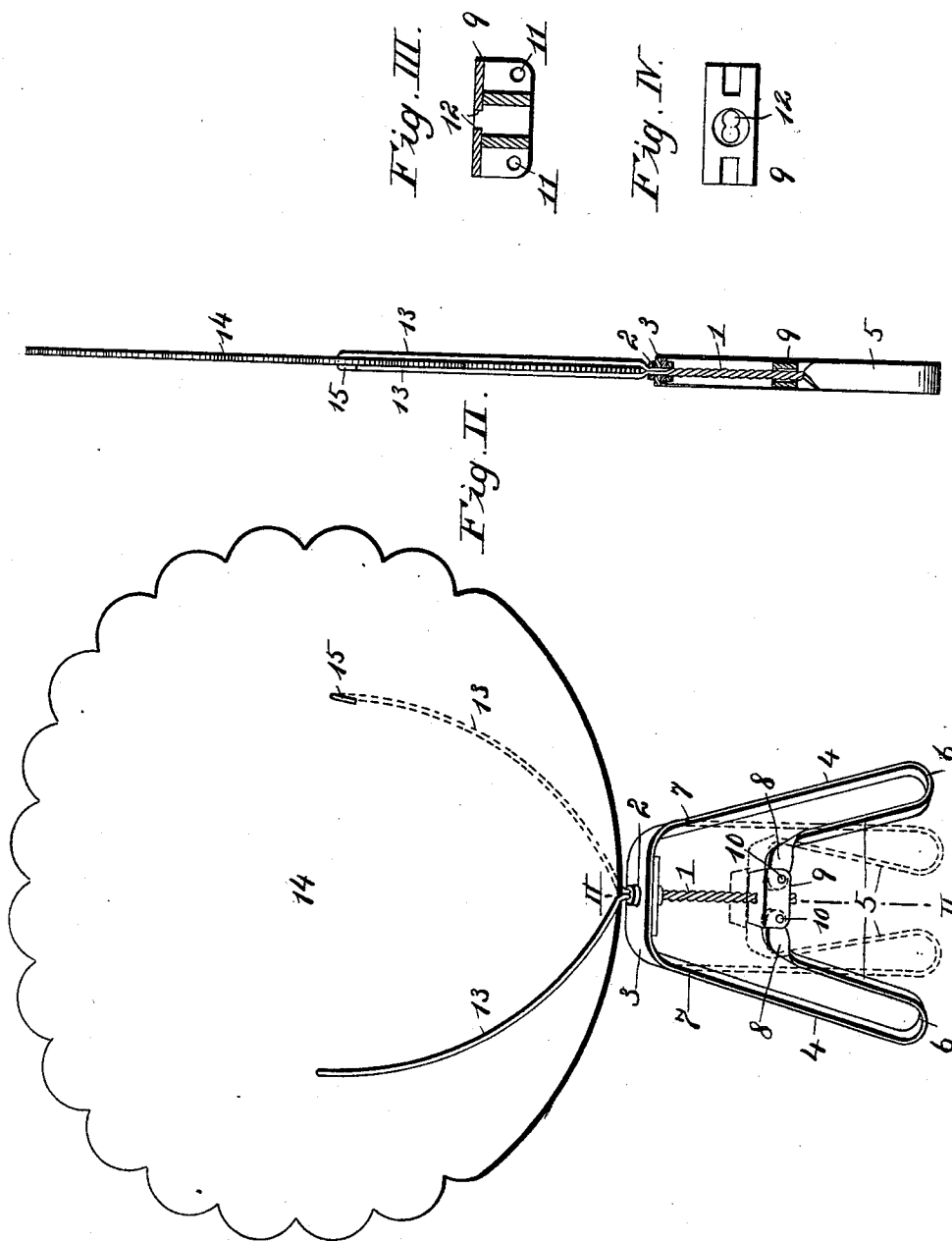


(No Model.)

W. W. McCALL.
RECIPROCATING FAN.

No. 518,852.

Patented Apr. 24, 1894.



Witnesses:
F. G. Fischer
Jas. E. Krueger

Fig. I.

Inventor:
W. W. McCall

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UNITED STATES PATENT OFFICE.

WILLIAM W. MCCALL, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF
TO WILLIAM T. WAITE, OF SAME PLACE.

RECIPROCATING FAN.

SPECIFICATION forming part of Letters Patent No. 518,852, dated April 24, 1894.

Application filed May 16, 1893. Serial No. 474,441. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. MCCALL, of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Reciprocating Fans, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in a reciprocating fan; and my invention consists in certain features of novelty hereinafter described and pointed out in the "claims."

Figure I, represents a side elevation of a fan attached to my improved device for reciprocating the same. Fig. II, is a section taken on line II, II, Fig. I. Fig. III, is a vertical section of the head for operating the screw which reciprocates the fan. Fig. IV, is a top view of the head for reciprocating the fan.

Referring to the drawings: 1, represents a screw stem suitably journaled, as shown at 2, to a spring bar 3, the spring bar 3, being provided with downwardly extending arms having return portions 5, thus forming bends 6, in the arms which add to the spring of said bar, the bar 3, bending when the arms 4, are pressed toward each other at the point 7, and the return portions 5, having a springing motion owing to their being bent, as shown at 6. The return portions 5, are turned inward, as shown at 8, and are secured to a head 9, by means of pins 10, passing through openings 11, in said head, and through the ends of the return portions 5. The head 11, is threaded, as shown at 12, to conform to the thread of the stem 1, the effect being that as the arms 4, are pressed toward each other (see dotted lines, Fig. I) the head 9, is forced upward, as shown in dotted lines, Fig. I, traversing a portion of the distance of the screw stem 1, thus turning the stem to a certain extent; then as the pressure of the hand is released to some extent on the arms 4, they, owing to their spring like construction, will spring outward into the position shown in the full lines, Fig. I, thus causing the head 9, to travel in the

opposite direction, and rotate or turn the screw stem 1, in the opposite direction. The wire forming the screw 1, preferably extends up some distance beyond the point where it is journaled to the spring bar, the different portions of the wire diverging and forming two prongs 13, in substantially a V shape, said prongs having their ends forced through and bent down upon the fan 14, as shown at 15, thus securely fastening the screw stem 1, to the fan. I do not confine myself, however, to the form of screw stem or means of attaching the same to the fan, as other means might be readily used without departing from the spirit of my invention.

In operation the arms 4, and 5, are pressed rapidly into the position shown in dotted lines, Fig. I, and then the pressure quickly released, causing the head 9, to travel back and forth upon the screw, thus oscillating the same, and with it the fan, causing a rapid current of air without any oscillatory or side motion as in the ordinary fan.

I claim as my invention—

1. The combination of a fan having a screw stem secured thereto; a threaded head engaging said stem and a spring bar secured to said stem and head for the purpose of reciprocating said screw and fan; substantially as and for the purpose set forth.

2. The combination of a fan; a threaded stem secured thereto; a spring bar to which said stem is journaled, spring arms 4; a threaded head and means for connecting said arms with said head; substantially as and for the purpose set forth.

3. The combination of a fan; a threaded stem having extending prongs thereon for securing said stem to the fan; a bar to which said threaded stem is journaled; a head working on said screw stem and a spring connecting said head with said bar; substantially as and for the purpose set forth.

4. The combination of a fan; a threaded stem formed of twisted wire and having extensions for connecting the same to a fan; a bearing in which said threaded stem is journaled, and means in connection with said

bearing whereby said threaded stem may be reciprocated; substantially as set forth.

5 5. The combination of a fan; a threaded stem; means for connecting the same with the fan; a spring bar 3, having outwardly extending arms 4, and return arms 5, bent at 6; a head 9, to which said return portions 5, are

connected, said head being apertured so as to engage with said threaded stem; substantially as described and for the purpose set forth.

WILLIAM W. McCALL.

Witnesses:

JAS. E. KNIGHT,
F. E. MULLETT.