

No. 880,554.

PATENTED MAR. 3, 1908.

W. F. MANNERS.
FLY GUARD.

APPLICATION FILED AUG. 9, 1906.

Fig. 1.

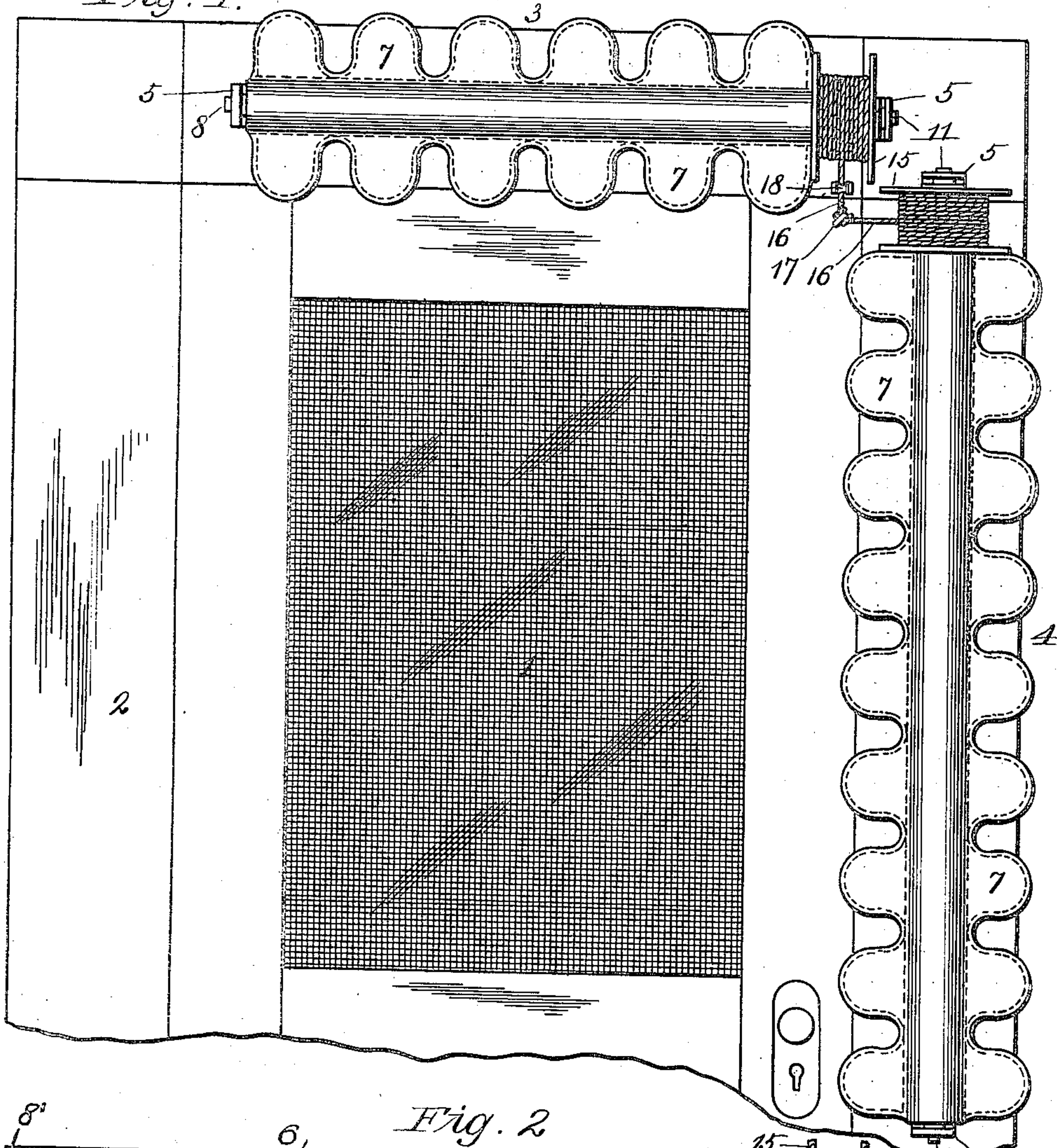


Fig. 2.

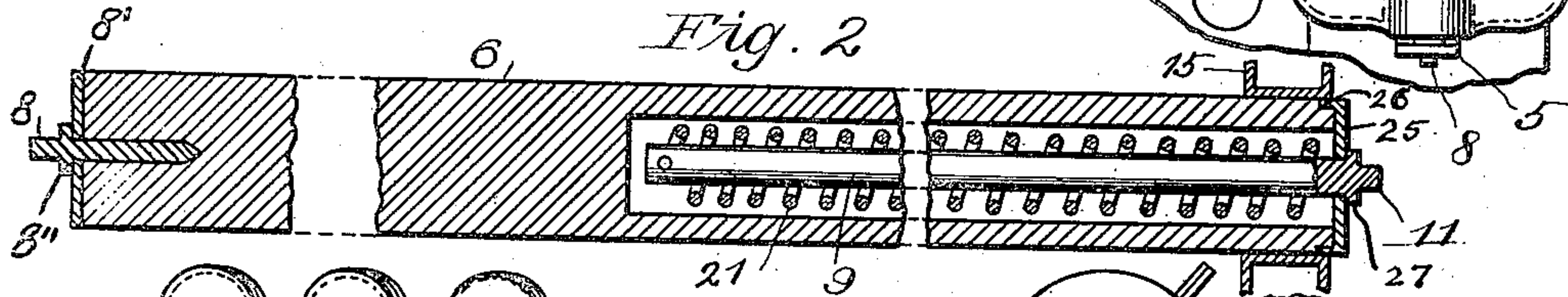


Fig. 4.

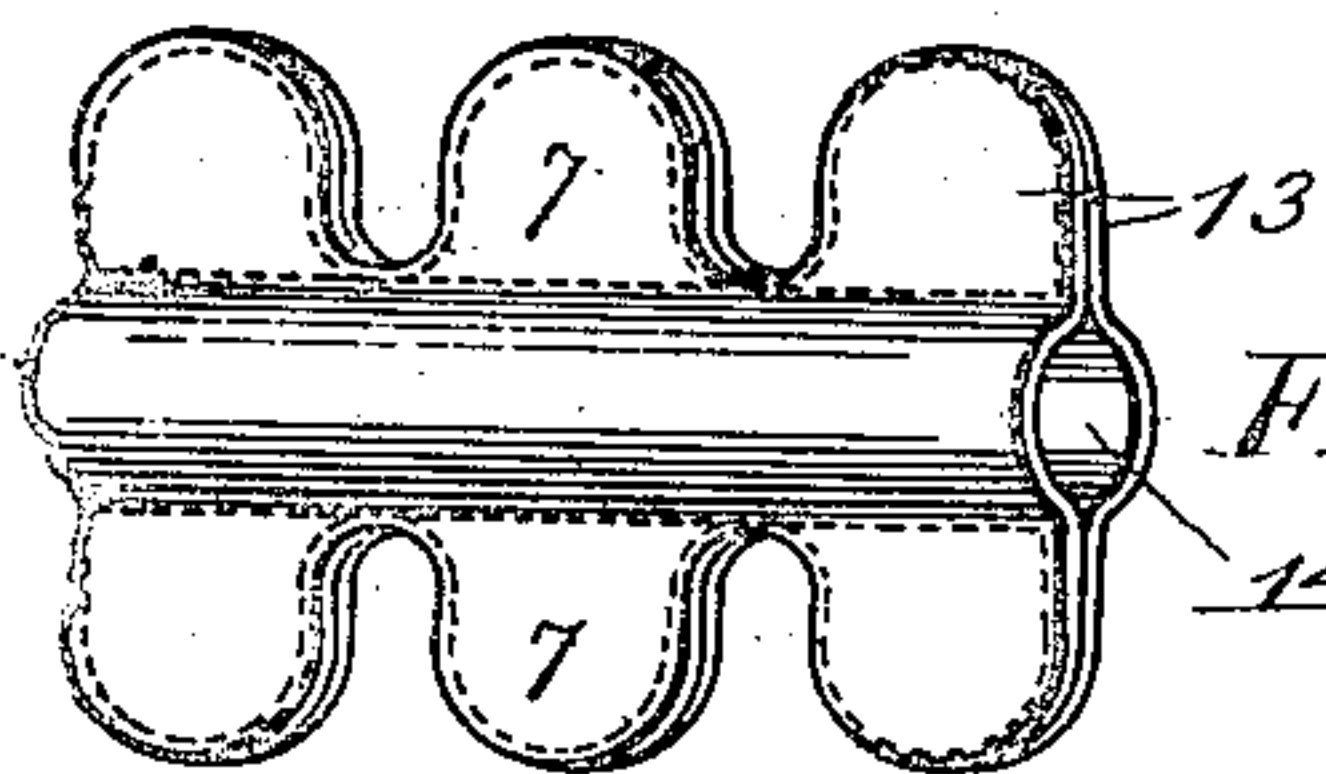
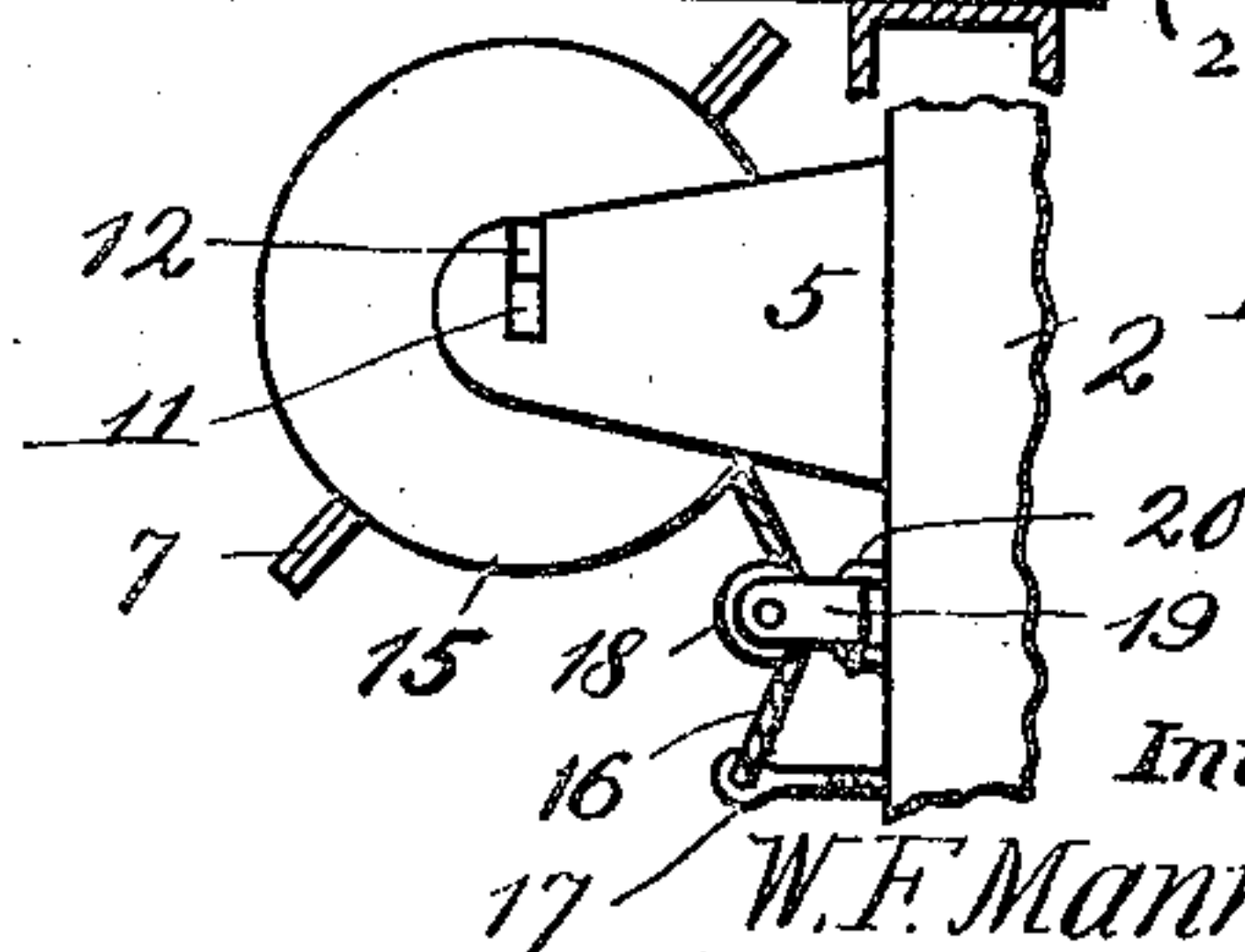


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM F. MANNERS, OF PARKER, KANSAS.

FLY-GUARD.

No. 880,554.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed August 9, 1906. Serial No. 329,807.

To all whom it may concern:

Be it known that I, WILLIAM F. MANNERS, a citizen of the United States, residing at Parker, in the county of Linn and State of Kansas, have invented certain new and useful Improvements in Fly-Guards, of which the following is a specification.

My invention relates to improvements in fly-guards; and my object is to provide efficient means for preventing flies, mosquitoes, and other insects from entering buildings when the doors thereof are opened.

The invention consists in the novel construction, combination, and arrangement of parts hereinafter described, pointed out in the claim and illustrated in the accompanying drawing, and in order that the invention may be fully understood reference will now be made to said drawing, in which:—

Figure 1 represents a broken front elevation of a door and case provided with my invention. Fig. 2 is a longitudinal section of a roller employed in carrying out the invention. Fig. 3 is a broken side elevation of the upper portion of the door case and my invention. Fig. 4 is a broken perspective of a portion of one of the rotary fans, forming part of the invention.

1 and 2 designate a door and case, and 3 and 4 designate rotary fans arranged at the top and one side of the case, respectively.

5 designates brackets in which the fans are journaled, said brackets being secured to the case.

Each fan consists of a roller 6, blades 7, a stub shaft 8 and a shaft 9 mounted in the brackets. Shaft 8 is fixed to one end of the roller, while shaft 9 extends loosely through the opposite end of the roller and is provided with an outer rectangular terminal 11 which fits snugly in an annular notch 12, in one of the brackets, to keep the shaft from turning with the roller. Blades 7 consist, preferably, of two layers of cloth 13 sewed together in such a manner as to leave a central longitudinal opening 14 for the reception of the roller, which fits tightly therein so that the blades will not slip upon said roller when the latter is rotated.

15 designates drums secured to the adjacent ends of the rollers for the reception of two independent cables 16 attached at their ends to said drums and to a screw eye 17 projecting from the adjacent corner of the door. The cable attached to the uppermost drum extends around a pulley 18, journaled

in a yoke 19, pivotally secured to a staple 20, projecting from the upper portion of the door-case, thus the pulley acts as a guide when the door is opened, and prevents the cable from pulling across the flange of its respective drum.

Roller 6, is provided at one end with a metal plate 8' through which stub shaft 8 passes, the latter having a collar 8'' thereon which abuts plate 8'. At its opposite end a plate 25 is mounted having an annular inwardly extending peripheral flange 26, which engages in a seat provided therefor in said end of roller 6. Shaft 9, has a collar 27, thereon which abuts plate 25. Since pulley 15, as depicted in Fig. 2, engages over flange 26, it assists in holding plate 25 in position.

21 designates a coil spring arranged in each roller and secured at one end to the latter and at its opposite end to the inner terminal of shaft 9.

In practice the fans are rotated at a high rate of speed when the door is opened, by the cables unwinding from the drums. The movement of the fans will scare away the flies gathered upon the door and the case, so that they will not pass through the doorway and enter the building while the door is being opened or closed. As the cables unwind, the springs will be wound up and thus automatically close the door just as soon as it is released, so that the springs usually applied to screen-doors for closing the same may be dispensed with.

I am aware that devices of the same general character have been patented, but the principal differences and advantage which my invention possesses over them is that I employ two entirely independent fans and independent operating means therefor. Hence either may be omitted, replaced by another of different size or length, or removed temporarily as for repairs; and even if one fan should not operate, the spring in the other would be of sufficient strength to close the ordinary screen door.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

In combination with a door frame and the door thereof, a pair of fan rollers, a metal plate on each end of each roller, a shaft passing through one of the plates and into the roller, and having a collar which abuts the plate, one of said plates on each roller having an inwardly extending peripheral flange

which is received in a groove provided there-
for in one end of said rollers so as to lie flush
with the peripheries of said rollers, a drum
on said last named end of each roller which
5 extends over and engages a portion of said
plate flange, a second shaft passed through
said second named plate and having a collar
which abuts the outer face of said second
named plate, a coil spring surrounding said
10 second shaft and being secured at one end to
the latter and at its opposite end bearing
against the inner face of the second named
plate, said rollers being disposed along the

top and one side of the door frame and hav-
ing their drums adjacent, a screw eye on the 15
door at the upper outer corner thereof, and
cords immovably affixed at one end to said
eye and having their free ends connected to
said drums.

In testimony whereof I affix my signature, 20
in the presence of two witnesses.

WILLIAM F. MANNERS.

Witnesses:

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