

(No Model.)

A. J. PARK & A. J. PARK, Jr.
FLY BRUSH FOR DOORS.

No. 514,604.

Patented Feb. 13, 1894.

Fig. 3.

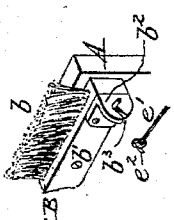


Fig. 2.

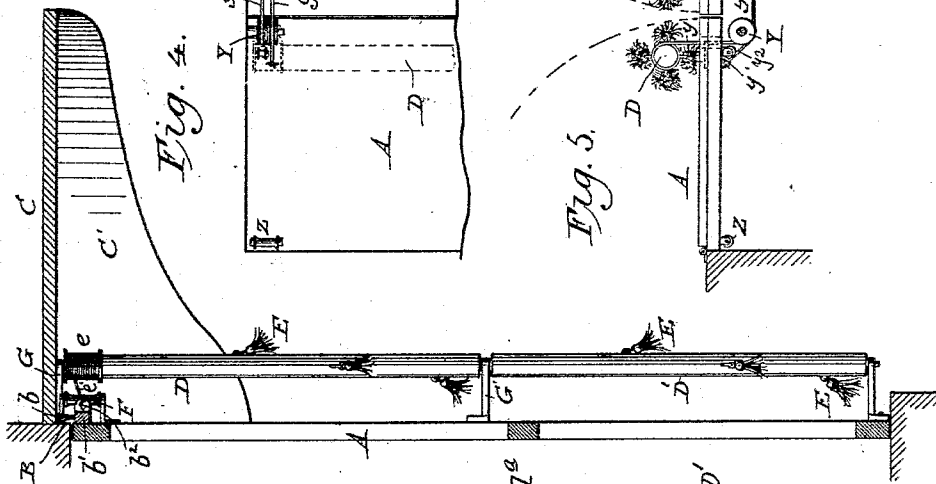


Fig. 4.

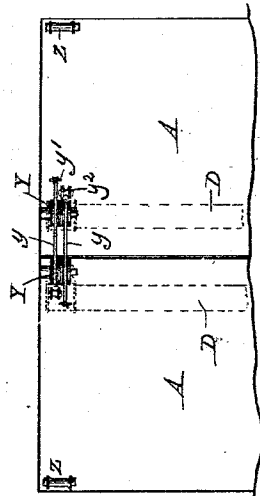


Fig. 5.

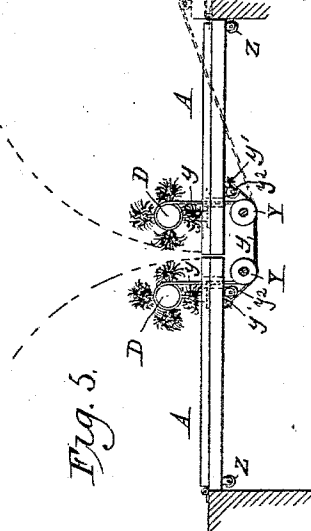


Fig. 1.

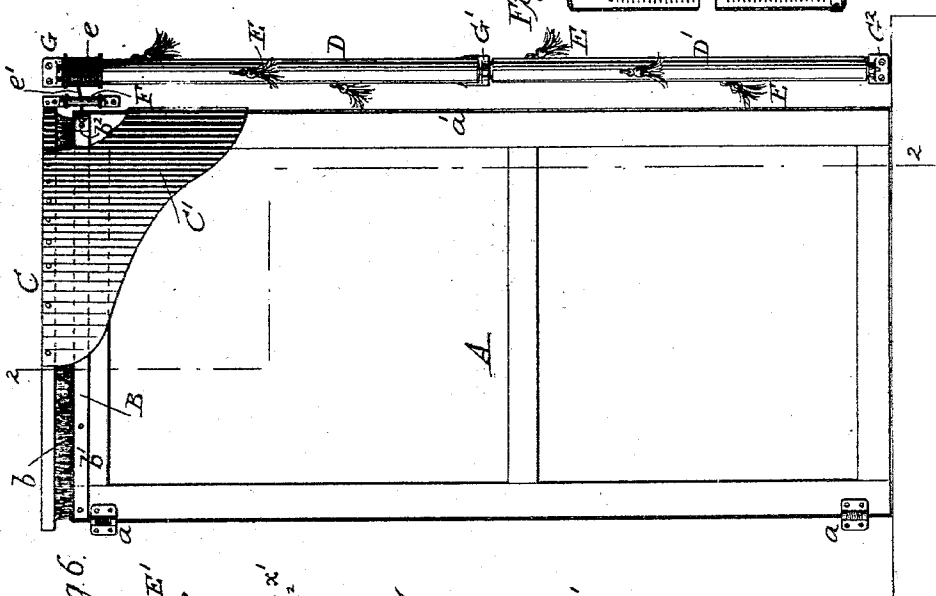


Fig. 7.

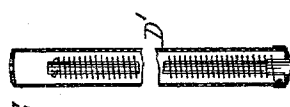


Fig. 6.

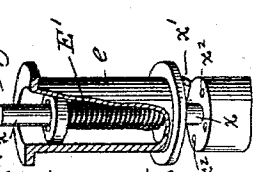
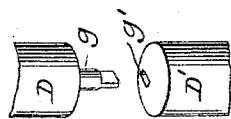


Fig. 7.



Witnesses,

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UNITED STATES PATENT OFFICE.

ALFRED J. PARK AND ALTON J. PARK, JR., OF VIRGINIA, MISSOURI.

FLY-BRUSH FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 514,604, dated February 13, 1894.

Application filed November 6, 1893. Serial No. 490,136. (No model.)

To all whom it may concern:

Be it known that we, ALFRED J. PARK and ALTON J. PARK, JR., both citizens of the United States, residing at Virginia, in the county of Bates and State of Missouri, have invented certain new and useful Improvements in Fly-Brushes for Doors, of which the following is a specification.

Our invention is more especially designed for use in connection with screen doors, but it may be applied to doors of all kinds.

Screen doors are extensively used to exclude flies from a house, room or compartment, and at the same time to admit air. They work well as long as the door is closed, but the frequent opening and closing of the door enables flies, sometimes in large numbers, to enter. Our invention is designed to overcome this difficulty in an improved way. We accordingly provide a brush, or a series of brushes, mount them on the door frame adjacent to the vertical edge of the door, and operatively connect them with the door so that as it is opened and closed, the brushes are moved or vibrated rapidly in such manner as to brush away the flies near the door, which would otherwise enter the room. We also arrange over the door, a cover or canopy, and secure to the upper horizontal edge of the door a brush which, when the door is opened, wipes across the lower surface of the canopy, removes any flies which may have accumulated thereon and prevents them from entering.

It is well known that flies are more apt to enter over the top of the door as it is being opened than they are to enter at the sides. Our improved canopy is so arranged close to the edge or top of the door that it prevents flies from passing down over the door as it is opened, and any flies which may accumulate on the bottom of the canopy are removed or frightened away by the brush carried by the door.

In the accompanying drawings, Figure 1 is a front view of a door with our improvements applied. Fig. 1^a is a detail view in section of the spring roller. Fig. 2 is a vertical section on the line 2—2 of Fig. 1. Fig. 3 is a detail view of the brush applied to the top of the door. Fig. 4 shows how our improvements may be applied to double doors. Fig.

5 is a plan view of the devices shown in Fig. 4. Figs. 6 and 7 are detail views of the sectional spring rollers employed.

The door A, may be of any suitable construction, and is hinged to its frame at *a*. At the upper edge or top of the door we secure a brush B, comprising bristles or tufts *b*, and a base piece *b'*.

Over the top of the door we attach a cover or canopy C, which is so arranged that as the door is opened and closed the brush wipes across its under surface. The cover or canopy C, is provided with a curtain C', extending around the front of the canopy and secured to the door frame, thus forming a shield within which the upper part of the door moves, and flies are prevented from entering the opened door at this point.

Near the vertical outer edge *a'* of the door, we arrange rollers D D', which are provided with brushes or tassels E. At the top, the roller D, carries a spool *e*, which carries a cord *e'*, attached to the bracket *b²*, on the base piece *b'*, of the brush. The bracket *b²* is shown in detail in Fig. 3. It is slotted at *b³*, so that the cord *e'* may be readily attached and detached. The cord has a knot or head *e²* on its end, as shown, to hold it in place. When it is desired to open and close the door without the use of the roller or the brushes, the cord may be detached, and the door may be opened and closed in the usual way. When, however, the cord is attached, the door will automatically close when released after being opened, as the roller D' is provided with a spring, as shown in Fig. 1^a.

F indicates a roller or sheave, behind which the cord passes in order that it may be properly guided.

The rollers are perfectly made in two sections D and D', and mounted in three brackets G G' G², one at the extreme upper and lower ends and one midway between. The upper section D, of the spring roller, has a projection *g*, which extends through the bracket G', and enters a slot *g'* in the top of the lower section or spring roller D'. In this way, the rollers may be more conveniently handled. The spool *e* is connected to the top of the upper section of the roller in the manner indicated in Fig. 6. The upper section of the roller has a pin *x*, projecting up from it into

a longitudinal vertical hole in the spool, which contains a spring E'. The spool may be adjusted vertically on the pin x , and when thus adjusted may be turned without turning the rollers E. The spool, however, has a downwardly projecting pin x' which is adapted to enter any one of a series of perforations x^2 , in the top of the roller. When the spool is lowered, and the pin is in one of the holes x^2 , the spool and roller will turn together. By this arrangement, the spool may be turned and adjusted to any desired extent, to give the desired tension to the spring in the roller section D'.

When the brushes are applied to double doors, the arrangement is preferably as indicated in Figs. 4 and 5, in which A indicate the doors, and D, the rollers which are mounted on the adjacent edges of the doors. Each roller is a spring roller, and is provided with a cord y , which extends around a pulley Y, secured to the door frame. The cord then extends over another pulley Y, and is secured at y' to the inside of the door. It will be obvious that, as the doors are opened and closed, the roller D, will be revolved and the brushes E operated, and the arrangement is such that the spring rollers automatically return the doors to their closed position when they are released. Should the door be fully opened or turned back, as shown by dotted lines in Fig. 5, it is desirable to have a small pulley Z, to hold the cord away from the sharp edge or corner of the door. Pulleys y^2 guide the cords when they extend through the openings therein.

We claim as our invention—

1. The combination of the door frame, the door, the canopy secured to the door frame over the door, and the curtain forming part of the canopy.

2. The combination of the door frame, the door, the brush secured to the top edge of the door, and a canopy arranged over the door in contact with which the brush moves when the door is opened.

3. The combination of the door frame, the door, the canopy secured to the door frame

over the door, a curtain forming part of the canopy, and a brush on the top of the door which moves in contact with the canopy.

4. The combination of the door frame, the door, a roller made in sections and mounted in brackets on the door frame, brushes carried by the roller a detachable connection between the upper and lower sections of the roller, a spring in one of the sections, a spool at the upper end of the upper sections, and a cord connecting the spool with the door.

5. The combination of the door frame, the door, a spring roller carrying brushes secured to the door frame at the vertical edge of the door and having a spool at its upper end, a canopy, a slotted bracket secured to the door and a cord detachably secured to the bracket and secured to the spool at the upper end of the spring roller.

6. The combination of the door frame, the door, a spring roller made in sections arranged vertically at the edge of the door, brushes carried by the roller a vertically adjustable spool at the top of the roller, and a pin on the spool adapted to engage with perforations in the top of the roller, for the purpose specified.

7. The combination of a pair of doors, rollers arranged vertically at their adjacent edges and having supporting brackets at their upper and lower ends, brushes carried by the rollers, and flexible connections between the rollers on each door and the adjacent edges of the opposite doors.

8. The combination of a pair of doors, a spring roller mounted in brackets on each door, brushes carried by the rollers, and a cord for each roller extending through the door which carries said roller passing around pulleys and secured to the opposite door.

In testimony whereof we have hereunto subscribed our names.

ALFRED J. PARK.
ALTON J. PARK, JR.

Witnesses:

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C. M. BROOKE.