Jan. 20, 1942. M. P. FIKES 2,270,753

FLAG FLIER

Filed July 23, 1940

Fig. 1

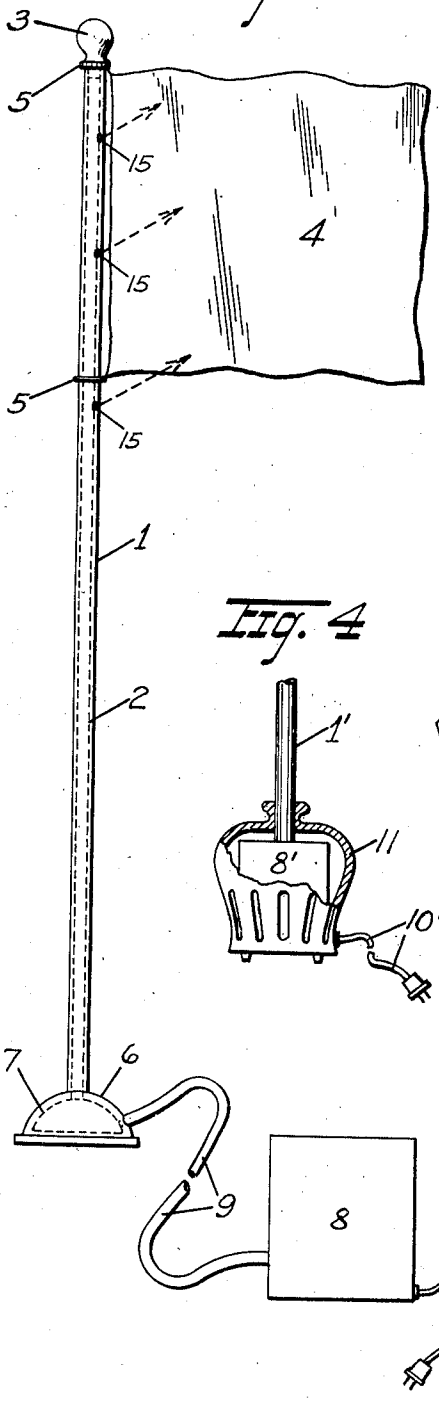


Fig. 2

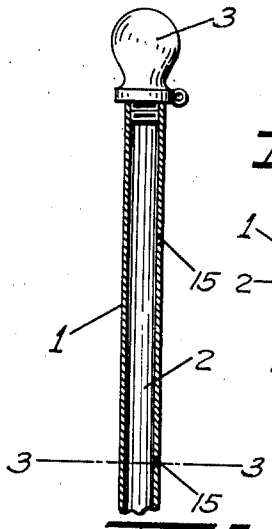


Fig. 3

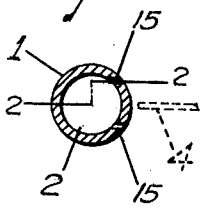


Fig. 4

Fig. 5

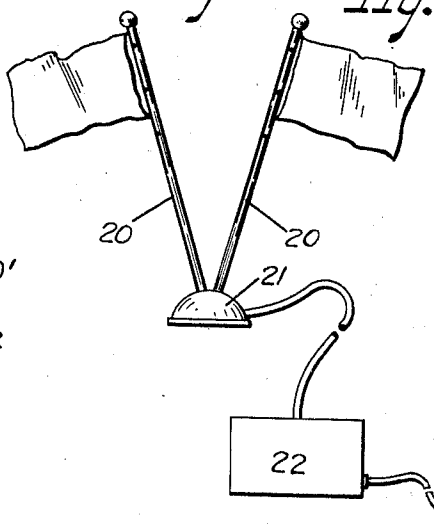


Fig. 6



Maurice P. Fikes

Inventor

By W. F. & D. Mseward

Attorneys

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FLAG FLIER

Maurice P. Fikes, Exeter Township, Berks County, Pa., assignor of one-half to Herbert W. S. Gehrke, Bern Township, Pa.

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2 Claims. (Cl. 116—173)

My invention relates to flag fliers using the action of air directed outwardly through wall apertures from the hollow interior of a pole, to wave a flag carried by said pole.

Devices for this purpose, as heretofore known and used, have inherent deficiencies and defects, and it is the object of my invention to overcome these faults and provide a more efficient, cleaner acting, and long lasting means for agitating a pole carried flag.

More specifically, my improvements relate to the means for effectively directing and discharging compressed air to spread and wave the flag, as will be more fully described hereinafter in connection with the accompanying drawing, the novel features thereof being specifically set forth in the appended claims.

Fig. 1 is a side elevation of a flag flier device embodying my invention.

Fig. 2 is an enlarged scale longitudinal sectional view of a top portion of the pole shown in Fig. 1, taken on the line 2—2 of Fig. 3.

Fig. 3 is a corresponding cross sectional view of the pole, taken substantially on the line 3—3 of Fig. 2.

Fig. 4 is a partial view of the supporting base portion of a flag flier showing a modified form in which the air compressor is enclosed in said base.

Fig. 5 indicates how a plurality of flag fliers may be combined for joint action from one air compressor.

Fig. 6 is fragmentary vertical section of the flag pole, on a greatly enlarged scale, showing the angular inclination of the discharge jet 15, and also indicating the small diameter of such aperture relative to its angular length through the pole wall.

Referring to the drawing, Fig. 1 indicates a usual tubular flag pole, the hollow interior thereof forming an air chamber 2, tightly closed at its upper end by an ornamental cap 3, and the flag 4 longitudinally attached thereto as by an edge engagement with strap or collars 5, 5 so as to swing radially from said pole. The lower end of the pole is shown as supported in a base block 6, dotted lines indicating a chamber therein in communication with pole chamber 2, and a source of air supply.

The parts above described are merely indicative of known construction, and the air heretofore has commonly been supplied by an ordinary fan blowing a blast upwardly through said pole and outwardly through wall apertures alined with the flag, generally proving inadequate and ineffective as a flag waver, and carry dust and grime directly to the flag which soon becomes unfit for use.

In my improved device, as shown, I supply air to chambers 1 and 2 from a source capable of building up and maintaining air in compression in said chambers at pressures between 5 and 40 lbs. per sq. in. found giving best results, rectangle 8 indicating diagrammatically any generally known motor driven air compressor of the self-regulating type, connected to chamber 1 by hose 9, and to an electric circuit by extension cord 10. Such air compressor may be remotely located, as indicated, or may be enclosed in a suitable base block 11, as indicated in Fig. 4. Another advantage of such air compressor is that it may be supplied only with filtered air, as by a usual filter, not shown, so that only clean air will blow over the flag 4, prolonging its time of usefulness.

The capacity of the air compressor will vary with the demand, but it must be sufficient to maintain the air under desired compression per square inch as aforesaid in chambers 1 and 2, despite constant discharge through apertures adjacent the flag; and the nature, size, and disposal of the apertures for such jets forms the essential part of my invention.

As shown in the enlarged scale views of Figs. 2 and 3, the apertures 15, 15, are arranged in cooperative pairs, with parallel axis, inclined in a plane transverse to the axis of pole 1, and spaced on opposite sides of said axis, so their outlets will direct air outwardly and upwardly on opposite sides of the flag 4. The spacing, angle of inclination, and diameter of said apertures will vary with the requirements, the maximum angle being approximately forty-five degrees, and their diameter being essentially but a fraction of their axial length so the discharging jets may be definitely directed. The drawing necessarily shows a distorted enlargement of such aperture diameters, which for the majority of uses, may be included within a range of .018 to .025 of an inch.

Air thus supplied by compressor 8 to chambers 1 and 2, may desirably be filtered as described, and maintained at a pressure in said chambers to insure adequate and constant force to the jets discharged through apertures 15, 15; and such jets discharging on opposite sides of the flag 4, are not baffled or diverted by contact with the attached edge of the flag, and may more effectively use their force. And the angle of inclination of said apertures, not only waves the

flag in an effective manner, but lifts it so it will spread outward from its supporting pole.

The number of pairs of apertures is desirably kept to the least possible, and their location lengthwise of the pole will naturally vary with the size of flag carried by the pole. In Fig. 1, three pairs are indicated, one above and one below the medial horizontal line of the flag, and a third pair below the lower flag attaching collar **5**, the latter giving an added spreading lift. Small flags may require only one pair of apertures, reducing the load on the compressor.

My invention lends itself to a variety of uses, and in Fig. 5 I have indicated two flag poles **20**, **20**, supported in a single base **21**, and supplied by air from a common air compressor **22**. And said air compressor may supply a number of such dual pole mountings, or a plurality of separately supported single flag poles.

Having thus fully described my invention, it will be apparent that I have accomplished the objects set forth. The minute size, laterally spaced and upwardly inclined apertures, not only accomplish a positive open spread and waving action of the flag, but provide for effective results even with very large flags depending on the air pressure maintained in chambers **1** and **2**. And such compressed air may be free of dirt by proper filtering so as to keep the flag clean, and its pressure varied at will, so that, for instance, a quiet hanging flag may spring into animation at the playing of a national anthem, or another timed relation. Air compressors for my purpose may be of sturdy construction providing for long time satisfactory use.

The specific embodiment of my invention, as above described, may of course be changed and modified within the scope defined and set forth in the following claims.

What I claim is:

1. A flag flier device comprising a tubular pole, and means for longitudinally attaching thereto an edge of a radially swingable flag, said pole having a top closure forming a longitudinal air chamber therein, and its lower position adapted for connection to means for maintaining air under compression in said chamber, the wall of said chamber adjacent its flag-attached end being provided with outlets of greater length than their diameters, and relatively transversely spaced and upwardly inclined to discharge jets of compressed air on opposite sides of the attached flag.

2. A flag flier device comprising a tubular pole, and means for longitudinally attaching thereto an edge of a radially swingable flag, said pole having a top closure forming a longitudinal air chamber therein, and its lower portion adapted for connection to means for maintaining air under compression in said chamber, the wall of said chamber adjacent its flag-attached end being provided with a pair of parallel co-acting outlets of greater length than their diameters, and relatively transversely spaced in a plane inclined to the axis of said chamber, so as to discharge parallel outwardly and upwardly directed compressed air jets on opposite sides of the attached flag.

MAURICE P. FIKES.