Dec. 21, 1926. 1,611,547

A. O. MILLER

HUB FOR FAN BLOWERS

Filed Jan. 31, 1925

Fig. 1

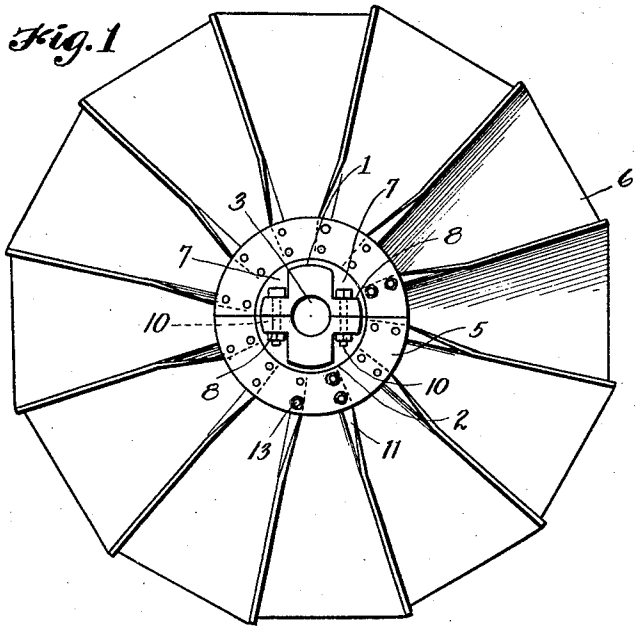


Fig. 2

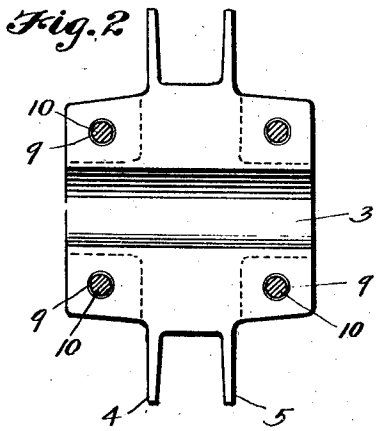


Fig. 3

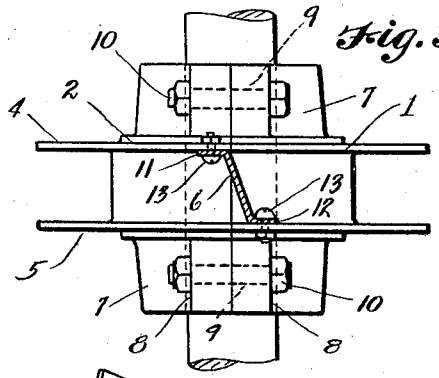
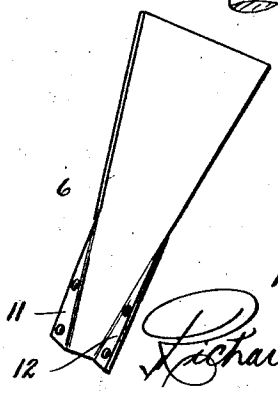


Fig. 4



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UNITED STATES PATENT OFFICE.

ALLEN O. MILLER, OF SEATTLE, WASHINGTON.

HUB FOR FAN BLOWERS.

Application filed January 31, 1925. Serial No. 6,025.

This invention relates to improvements in hubs for blower fans, or the like, and has for its principal object to provide an improved type of split hub that will facilitate the mounting or removal of such fans especially on line shafts.

Another object resides in the provision of a split hub having two spaced apart annular flanges to which the inner ends of the vanes of the fan may be removably and rigidly fixed.

Other objects reside in the various details of construction and combination of parts embodied in the invention as will hereinafter be described.

In accomplishing the objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of a blower fan equipped with a hub embodied by the present invention.

Figure 2 is an enlarged inside face view of one of the hub sections.

Figure 3 is a side view of the hub, illustrating the manner of mounting the fan vanes.

Figure 4 is a perspective view of one of the vanes of the fans.

Referring more in detail to the drawings—

1 and 2, respectively, designate the complemental sections of a diametrically split hub embodied by the present invention; said hub being provided centrally with an opening 3 for receiving the shaft on which it is to be mounted and provided circumferentially about its central portion with two spaced apart flanges 4 and 5 between which the inner ends of the fan vanes or blades 6 are disposed and to which said blades are secured.

The end portions of the hub extend somewhat beyond the flanges and at opposite sides of the plane of separation of the two sections are cut away, as at 7, to provide the parallel shoulders 8. Bores 9 are provided through these shouldered portions at opposite sides of the shaft for receiving bolts 10 by means of which the two sections may be drawn tightly together about the shaft.

The vanes, or blades 6, preferably are of flat sheet metal of the character shown in Figure 4 and are mounted to extend radially of the hub and at an angle to the axial line thereof. They increase in width toward their outer ends and at their inner ends have their opposite side edges turned laterally to provide the flanges 11 and 12 through which rivets or bolts 13 are extended to secure the same to the hub flanges 4 and 5.

To further strengthen and secure the hub sections together, it is preferred to so locate the blades so that one at each side will extend across the line of separation of the hub section as shown in Figure 3, and when riveted to the flanges will serve to tie the sections together.

A hub of this character permits the placing of a fan on a line shaft at any point without necessitating its being slipped along from the end thereof and the removal of shaft supporting bearings, or the like. Likewise, it provides for an easy and ready removal of a fan.

Such hubs may be made in different sizes and it is apparent that various details of construction could be varied without departing from the spirit of the invention.

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

1. A demountable fan comprising a diametrically split hub with means for securing the sections thereof together at opposite sides of a mounting shaft, spaced apart flanges encircling the hub and a plurality of vanes each with its inner end disposed between the said hub flanges and detachably secured thereto.

2. A demountable fan comprising a hub that is diametrically split to provide two complemental sections for engaging opposite sides of a mounting shaft, connecting bolts securing the said sections functionally together, spaced apart flanges encircling the hub, a plurality of radially extending vanes, each with its inner end disposed between said flanges with its opposite side edges detachably secured thereto; the opposite side edges of certain of said vanes being secured to different sections of the hub to supplement the said connecting bolts.

Signed at Seattle, King County, Washington, this 26th day of November 1924.

ALLEN O. MILLER.