

Oct. 13, 1942.

W. J. CAMPBELL
EXHAUST FAN UNIT

2,298,677

Filed Aug. 3, 1940

2 Sheets-Sheet 1

Fig. 1.

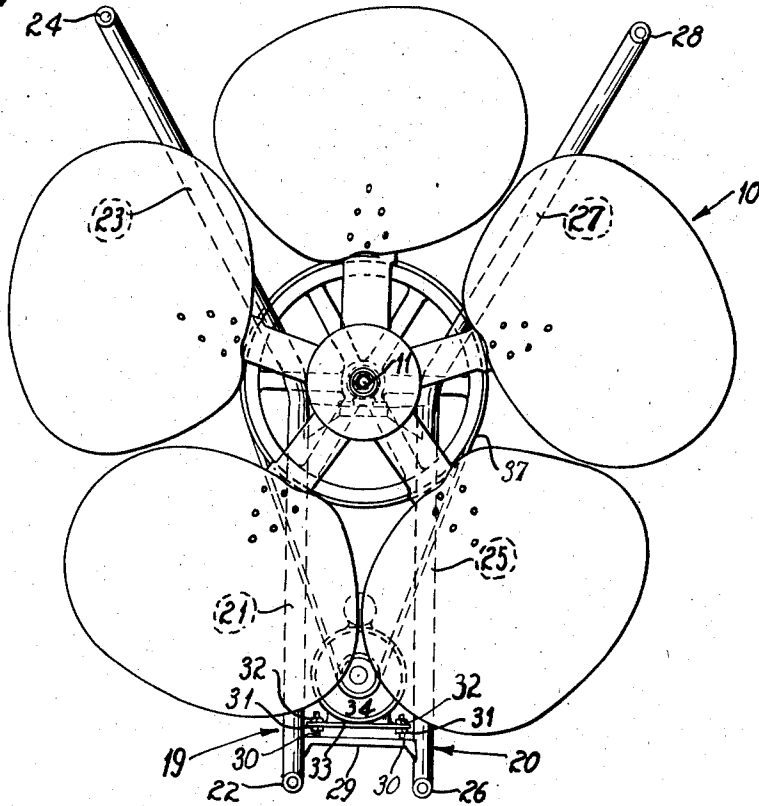
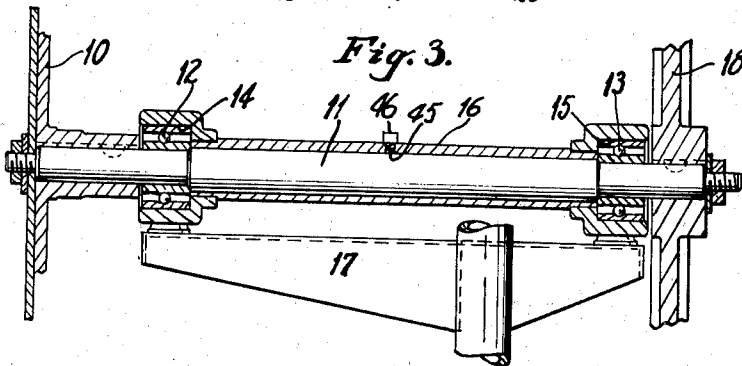


Fig. 3.



BY

INVENTOR
William J. Campbell,
Hood & Zehn,
ATTORNEYS.

Oct. 13, 1942.

W. J. CAMPBELL

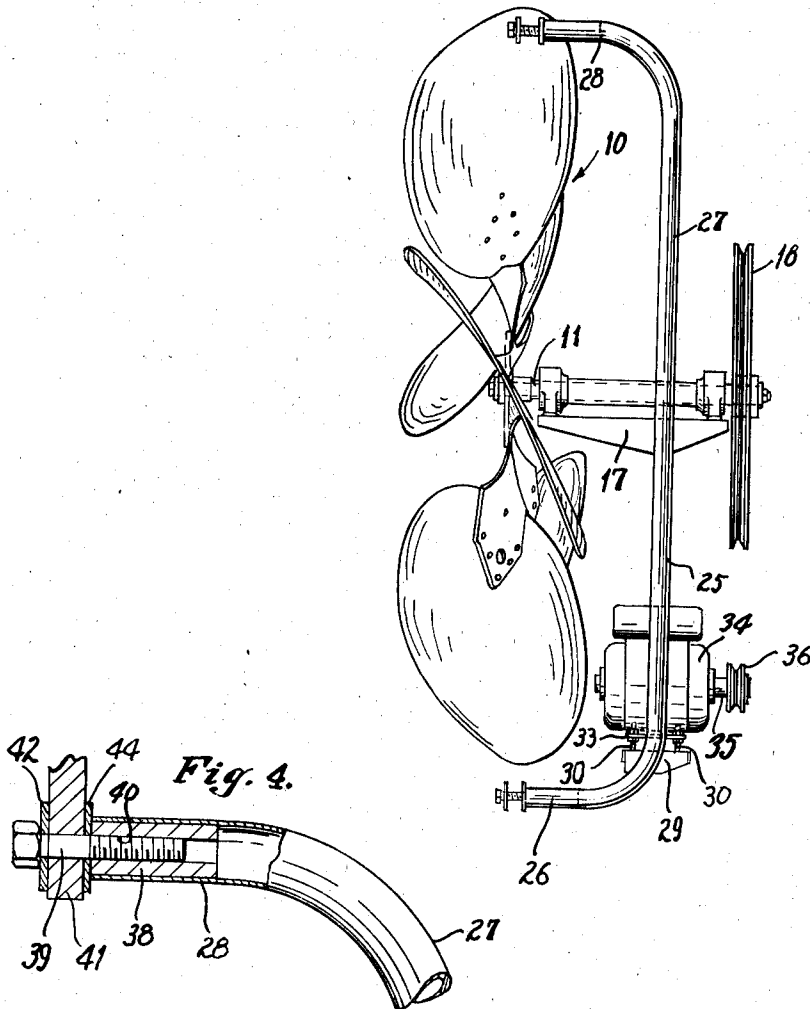
2,298,677

EXHAUST FAN UNIT

Filed Aug. 3, 1940

2 Sheets-Sheet 2

Fig. 2.



INVENTOR.
William J. Campbell,
BY *Hood & Hahn,*
ATTORNEYS.

UNITED STATES PATENT OFFICE

2,298,677

EXHAUST FAN UNIT

William J. Campbell, Indianapolis, Ind., assignor
to Climax Machinery Company, Indianapolis,
Ind., a corporation of Indiana

Application August 3, 1940, Serial No. 350,875

1 Claim. (Cl. 230—273)

The present invention relates to exhaust fan units for attic and like installations, and it is the primary object of the invention to provide a compact and unitary assembly which shall be efficient in operation, inexpensive to produce, and readily handled for convenient installation.

To the accomplishment of the above and related objects, my invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that change may be made in the specific construction illustrated and described, so long as the scope of the appended claim is not violated.

Fig. 1 is a front elevation of my fan unit;

Fig. 2 is a side elevation thereof;

Fig. 3 is a fragmentary, enlarged view of the mounting means for the fan shaft, parts being shown in section; and

Fig. 4 is an enlarged, fragmentary, part-sectional view of a frame detail.

Referring more particularly to the drawings, it will be seen that I have illustrated a propeller 10 of standard construction mounted on a shaft 11 to rotate therewith. The shaft 11 is journaled in bearings 12, 13 received in pockets 14 and 15 at opposite ends of the shaft housing 16; and said shaft housing is suitably fixedly supported on a platform 17. At its end remote from the propeller 10, the shaft 11 carries a sheave or pulley 18.

The platform 17 is secured, preferably by welding or the like, between two frame members indicated generally by the reference numerals 19 and 20. The member 19 consists of a main upright portion 21 terminating at its lower end in a forwardly projecting arm 22 substantially parallel with the shaft 11; and a laterally inclined portion 23 terminating at its upper end in a forwardly projecting arm 24 substantially parallel with the shaft 11. Similarly, the member 20 consists of a main upright portion 25 terminating at its lower end in a forwardly projecting arm 26 substantially parallel with the shaft 11 and lying in a common horizontal plane with the arm 22; and a laterally inclined portion 27 flaring away from but lying in a common vertical plane with the portion 23 and terminating at its upper end in a forwardly projecting arm 28 substantially parallel with the shaft 11 and lying in a common horizontal plane with the arm 24.

The platform 17 is mounted adjacent the upper ends of the upright portions 21 and 25, and the frame portions 23 and 27 flare oppositely away therefrom. Near the lower ends of the upright

portions 21 and 25 is suitably secured, as by welding or the like, a second platform 29. Bolts 30, 30 project upwardly from the surface of said platform 29, and nuts 31, 32, threadedly mounted on said bolts, adjustably grip and support the bed plate 33 of an electric motor 34, the spindle 35 of which carries a sheave 36 drivingly connected, by belt 37, to the sheave 18.

Each of the arms 22, 24, 26, and 28 is provided with a tapped opening in its end, coaxial with the arm. In the illustrated embodiment, the frame members 19 and 20 are tubular, and each such tapped opening is provided through the medium of an internally threaded plug or bushing 38 suitably seated, with a tight fit, in the open tubular end of an arm. A bolt 39 may, of course, be threaded into the bore 40 of each bushing 38, to clamp the associated arm 22, 24, 26 or 28 to a support element 41 penetrated by said bolt. Preferably washers 42, 42 will be provided on opposite sides of the support member 41, as in the illustrated embodiment.

By this means, the unitary fan assembly may be secured in place in a wooden frame or the like.

Intermediate its ends, the housing 16 is formed with a port 45 normally stoppered by a plug 46. It will be seen that the shaft 11 extends entirely through the housing 16, but that it is supported wholly in the anti-friction bearings 12 and 13; and it will also be seen that the shaft and said bearings cooperate to close the ends of the housing. The assembly is maintained by the fact that the fan or propeller 10 is secured to one protruding end of the shaft 11 immediately adjacent the bearing 12, while the sheave 18 is secured to the other protruding end of the shaft 11 immediately adjacent the bearing 13.

A suitable lubricant may be injected through the port 45 into the housing 16, where it will surround and cushion the shaft 11 and whence it will work into the bearings 12 and 13 to lubricate them.

The entire assembly is compact and readily handled. No assembling need be done by the person who is installing the unit, but on the contrary the whole unit may be carried or shifted by a grip on one or both of the frame elements 19 and 20. Adjustment of the nuts 31, 32 will bring the motor spindle 35 into perfect parallelism with the shaft 11; or will shift the motor 34 bodily to vary the tension of the belt 37, if desired.

I claim as my invention:

A fan unit comprising two generally upright frame members lying substantially in a common

plane, a platform secured between said frame members, lying substantially in a plane perpendicular to said common plane and projecting oppositely beyond said common plane, means supported on said platform at at least two points located respectively on opposite sides of said common plane, a propeller-carrying shaft journalled in spaced supports provided by said means

with its axis substantially perpendicular to said plane and projecting oppositely beyond said plane, a second platform secured between said frame members, a motor mounted on said second platform and having a spindle substantially parallel with said shaft, and means connecting said motor spindle to drive said shaft.

WILLIAM J. CAMPBELL.