Jan. 9, 1940. O. G. HILDEBRAND ET AL 2,186,674

ADAPTER FOR ELECTRIC FANS

Filed July 24, 1937

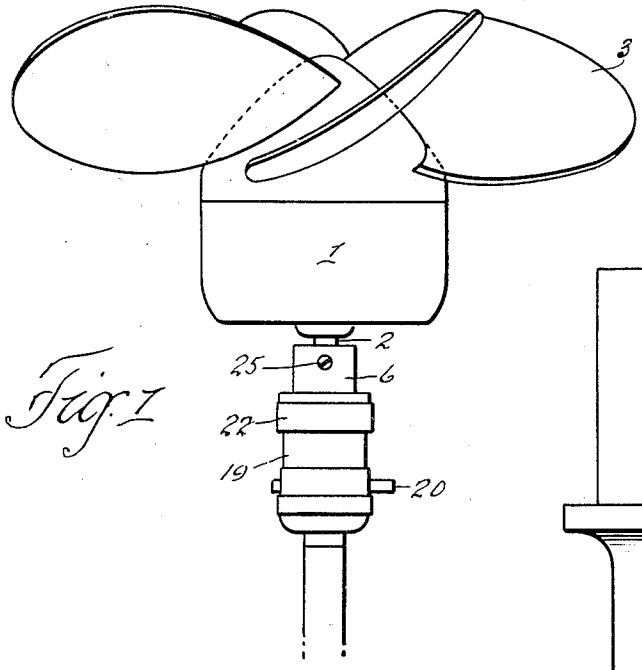


Fig. 1

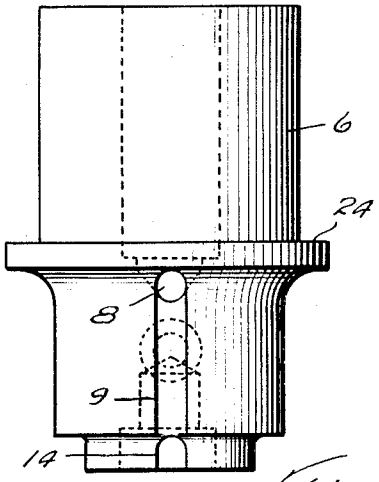


Fig. 3

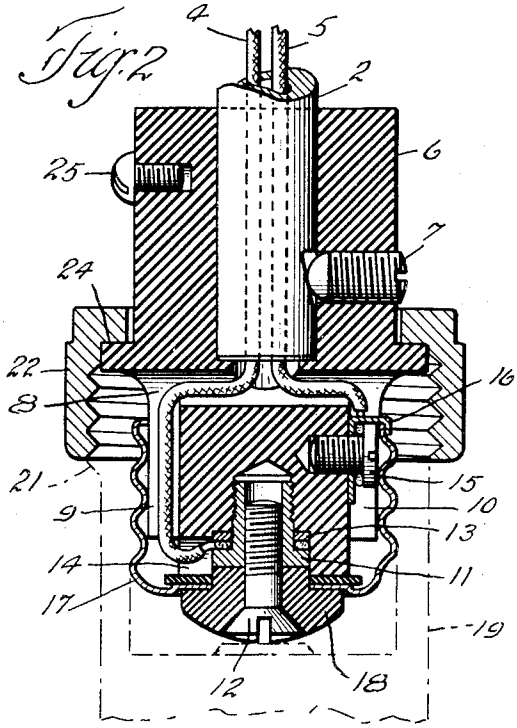


Fig. 2

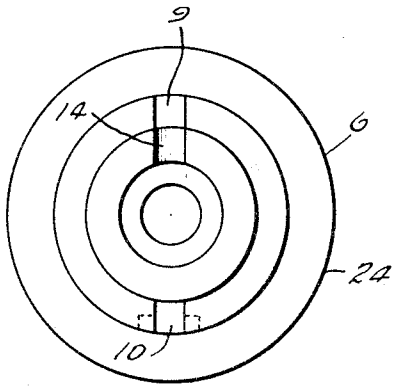


Fig. 4

INVENTOR.
Emile H. Berger
Otto G. Hildebrand
BY Hull, Brock & West
ATTORNEY.

Patented Jan. 9, 1940

2,186,674

UNITED STATES PATENT OFFICE

2,186,674

ADAPTER FOR ELECTRIC FANS

Otto G. Hildebrand and Emil H. Berger,
Cleveland, Ohio

Application July 24, 1937, Serial No. 155,493

1 Claim. (Cl. 173—328)

This invention relates to an adapter for securing an electric fan to a standard electric lamp socket and which is particularly adapted for use with a fan of the type in which the motor shaft is stationary and the housing and fan rotates about such shaft.

One of the objects of the invention is to provide an adapter for use with a fan of the character described which has one end adapted to receive therein the fan shaft and the other end adapted to engage in a standard lamp socket in such a manner that the fan will be rigidly and firmly held in place.

Another object of the invention is to provide an adapter of the character described which has therein terminals which receive the fan motor wires and which are so disposed and arranged as to contact with the terminals of a standard lamp socket when the adapter is engaged therein.

A still further object of the invention is to provide an adapter of the character described which is adapted to be secured to the stationary motor shaft of an electric fan and which has passageways therein through which the motor wires extend so that there will be no exposed wires, the fan being turned on and off by means of the standard socket switch or wall switch.

Further and more limited objects of the invention will appear as the description proceeds and by reference to the accompanying drawing in which Fig. 1 is a view in elevation disclosing the manner of securing the fan to the lamp socket; Fig. 2 is a transverse sectional view of the adapter and lamp socket; Fig. 3 is a view in elevation of the adapter and Fig. 4 is an end view of the adapter shown in Fig. 3.

Referring now to the drawing, the reference character 1 designates an electric fan having a shaft 2 extending outwardly therefrom. Secured to the outer end of the fan and rotating therewith are a plurality of flexible blades 3 which are preferably formed of rubber. The fan is of the type in which the motor shaft is stationary and the housing rotates about the shaft. The shaft is hollow and the motor wires 4 and 5 extend therethrough. The adapter consists essentially of a body 6 of insulating material having a bore adapted to receive the motor shaft which is held in place by a set screw 7 which preferably engages in a notch provided in the shaft. Extending through the central portion of the adapter body is a transverse bore or passageway 8. Extending at right angles to the bore 8 are a pair of slots 9 and 10 which intersect the bore 8 at right angles thereto. Threadedly secured in the outer end of the adapter body is a sleeve 11 which is interiorly threaded and receives therein a screw 12. Surrounding the sleeve 11 and engaging in a recess provided in the end of the adapter is a metal ring 13. The motor wire 4 extends through the hollow shaft and thence through the bore 8 and slot 9 and thence through an opening 14 and is secured to the sleeve 11, being clamped between the shoulder provided on the sleeve and the metal ring 13. Disposed at one side of the adapter and threadedly engaged therein is a bolt 15 to which the motor wire 5 is secured. The bolt 15 is disposed within the slot 10 and the head portion thereof is countersunk as shown. Carried by the bolt 15 is an angular somewhat L-shaped metal strip 16. Fitting over the outer end of the adapter body is a metal sleeve 17 which is formed to provide threads thereon which are adapted to engage the threads of a standard lamp socket. The sleeve 17 extends over the end of the adapter and is held in place by the bolt 12 and an insulating block 18. The metal strip 16 at its outer end engages over the end of the sleeve 17 and serves to provide a connection between one terminal of the lamp socket and the wire 5. The lamp socket is designated by the reference character 19 and the adapter threadedly engages therein as shown most clearly in Fig. 2. The reference character 20 designates a standard switch which is carried by the lamp socket and which serves to turn the fan on and off. The outer upper edge of the standard lamp socket has a series of threads formed thereon, as indicated by the reference character 21. Fitting over the upper end of the adapter body is an interiorly threaded sleeve 22 which engages with a shoulder 24 provided on the adapter body. The sleeve 22 is adapted to be threadedly engaged with the threads 21 on the exterior of the lamp socket and serves to provide a more rigid connection between the adapter body and the socket. A set screw 25 is provided to prevent the sleeve from falling off when it is disengaged from the lamp socket. The adapter terminals are so disposed and arranged as to engage with the terminals of the lamp socket when the adapter is engaged therein so that it will not be necessary to have any exposed wires. The adapter enables the fan to be secured directly to a lamp socket, such as a ceiling or wall outlet or a socket provided in a floor lamp, table lamp or wall lamp. The lamp socket switch serves as a means for controlling the operation of the fan. The adapter body is preferably formed of a single piece of material such as Bakelite or other suitable insulating material.

It will now be clear that we have provided an adapter for securing an electric fan to a standard lamp socket which will accomplish the objects of the invention as hereinbefore stated. It will, of course, be understood that the embodiment of the invention herein disclosed is to be considered merely as illustrative and not in a limiting sense as various changes may be made in the arrangement of parts and the details of construction without departing from the spirit of our invention as the invention is limited only in accordance with the scope of the appended claim.

Having thus described our invention, what we claim is:

An adapter for securing to a standard lamp socket the non-rotatable shaft of an electric fan, said adapter comprising a body of insulating material having a bore extending thereinto from one end thereof for the reception of the shaft, said bore having a seat for the end of the portion of the shaft inserted thereinto and said body having means cooperating with said bore and the said portion of the shaft for securing the latter in place within the said bore, the said body also having a transverse slot extending thereacross below the seat for the shaft and having longitudinal recesses formed in the sides of the lower portion thereof and which extend downwardly from the said slot, a screw threaded into the lower end of said body and forming a contact adapted to engage the central contact of the lamp socket, the said adaptor comprising also a metallic sleeve secured to the lower portion of the aforesaid body and threaded for engagement with the threads of the lamp socket, and the said adapter having means for electrically connecting to the said sleeve one of the conductors of the fan extending through the shaft and through the transverse slot and into one of the longitudinal recesses of the adapter body, said body also having means for electrically connecting to the said screw the other conductor for said fan extending through the said slot and along the other recess in the lower portion of the said body.

OTTO G. HILDEBRAND.
EMIL H. BERGER.