

Appari's design of fan for Buildings and wind mills

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Abstract - Appari's design of fan for residential and public buildings is effective to give the maximum wind from the same capacity of the motor. Also it can be used for wind mills. It is very simple and very effective to generate the wind energy. Also it works when there is not sufficient wind. The combination of the blade angles bent zero to ninety degrees along with black and white coloured blades will prove very effective to develop the maximum wind energy. The same fan blades can also be used for vehicles and helmets. If the same blades are used along with one dynamo and small bulb fitted in the fan portion will work effectively to give the sufficient light, which is produced by the wind and light & heat generated from the sunlight.

Key words - Fan Wind Mill, Wind Energy and National Economy.

I. INTRODUCTION

In residential and public buildings and other purposes the various types of fans are in use to get the wind and to maintain the natural temperature to the lowest possible. If the blades of the fans are flat which do not have any bend then the blades of the fan will simply rotate in one plane and will not give any substantial air flow in the ambient space. This necessitates redesigning the blades so that maximum air may be displaced for effective air circulation to cool the ambience. The cooling of any ambience may comprise a room, a small laptop, a desktop or an engine.

II. DESIGN OF FAN BLADES

The inside width of each blade may be kept equal to the one sixth perimeter of the drum i.e. inside Perimeter available for the blades for three blade, one eighth for four blades, one fourth for two blades and so on. The inside width of each blade is equal. The width of each blade at outside free end is equal to one sixth perimeter available at outside of the free edge blade for three blades, one eighth for four blades, one fourth for two blades and so on. The outside width of each blade is equal. The angle of bent of each blade at the inside is equal to zero degrees. The angle of bent shall be gradually increased from zero degrees to ninety degrees from inside to outside. The material used for the blades may be any metal, plastic, etc. The thickness of the blades should be kept minimum for economy, but in any case the thickness should not be less than the thickness required for plane rotation which should avoid the vibration of the blades and thereby the vibration of the fan, noise etc. The thickness of the blades may vary according to the material used. The length of the blades may vary according to the requirement and the capacity of the motor. The inside perimeter is equal to $22/7$ times the diameter of the drum or in short it is the circumference of the drum for inside perimeter. And the circumference measured at the outside of fan blades in which portion it rotates. The blades are basically trapezoidal in shapes. The angle given to each blade is zero to ninety degrees from inside to outside free end irrespective to the length of the blade. The length of the blades depends on the capacity of the motor and the requirement of the wind. not only this the length of the blades may vary as per the wind energy to be generated which depends on the region where the wind mill is to be installed. In short the fans are designed depending on the capacity of motor and the capacity of the motor depends on the requirement of the wind for any room, laptops etc [3]. And for wind mills the length of the blades depends on the requirement of the energy to be generated, again it depends on the natural wind velocity. The black and white colored blades rotate in the light and heat produced by the sun though there is not sufficient wind. In this way wind mills works on wind as well as on light and heat produced by the sunlight.

Such blades if we use for the wind mill will prove to produce the maximum energy from the wind. In this case the numbers of blades are even e. g. two, four, six, eight and so on and the colour of each alternate blade is white and black respectively. As the colour of each blade is alternatively black and white, because of this when light falls on these blades will rotate the fan though there is no wind. So it will produce the maximum wind energy.

The principle of machines i.e. free wheel technology can also be used so that the fan will rotate continuously without stopping though there is short intervals of natural wind. And such blades designed for the wind mills plays very important role to generate the maximum wind energy.

Even this type of small fans along with one dynamo fitted on back side of the fan and one bulb inside the drum of the fan can give the light which can be used anywhere e. g. top of residential and public buildings, on any pole, gardens etc. Also it can be used for vehicles and helmets which are used for the motor cycle drivers.

III. CONCLUSIONS AND SALIENT FEATURES

1. Maximum effective wind from the same capacity of the motor.
2. Maximum wind power energy from the wind mills.
3. Because of additional coloring effect it produces the additional energy.
Appari's Design of Fan for Residential Buildings and Wind Mills
4. Can be used for vehicles and helmets.
Can also be used for lighting purpose just by using one dynamo and one bulb fitted inside the drum of the fan.
5. Saves billions of Rs. of the nation and serves in better way.

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