

# Appari's Design of Fan

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**Abstract:-**The various fans are in use in residential and public buildings and other purposes. Just by changing the shape of existing blades of fan by making the bending of fan blades at 90° towards the free end of the blades will give more effective wind. Also it is more effective for small capacity of motor. And the overall consumption of power will be less, which leads to saving in electricity and leads to national economy.

**Keywords:-** Fan, Angle of Blade, Electricity, Wind Mill, Appari.

## 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 simply rotate and will not give any wind. So the blades are bent to get the wind. If this bent is made 90° towards the free end of the blade we will get maximum wind for small capacity of the motor also.

Just by changing the shape of blades of the fan we will get maximum wind, so there is saving in the cost of capacity of motor and thereby saving in the electricity, which leads to improve the national economy.

This type of fan is also suitable for wind mill to generate the wind energy.

## II DESIGN

A) Design of ceiling fan/ table fan ,etc

1. The inside total width of the blades may be kept equal to the one third perimeter of the drum/ inside perimeter available for the blades for three blade, one fourth for four blades, one half for two blades and so on.
2. The inside width of each blade is equal.
3. The total width of blade at outside end is equal to one third perimeter available at outside of the blade for three blades , one fourth for four blades, one half for two blades and so on.
4. The outside width of each blade is equal.
5. The angle of bent of each blade at the inside is equal to zero degrees.
6. The angle of bent shall be gradually increased from zero degrees to ninety degrees from inside to outside.

B) the material used for the blades may be any metal, plastic, etc

C) 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.

D) The thickness of the blades may vary according to the material used.

E) The length of the blades may vary according to the requirement and the capacity of the motor.

### III SALIENT FEATURES AND CONCLUSIONS

- 1 More effective wind.
- 2 Lower capacity of motor will be effective for effective wind which leads to saving in the cost of motor.
- 3 Saving in electricity.
- 4 Suitable for wind mill to generate the wind energy effectively.
- 5 National economy will improve.