Dec. 22, 1936. M. DE MISA 2,065,270

REVOLVING BLOWER AND SIGN CARD

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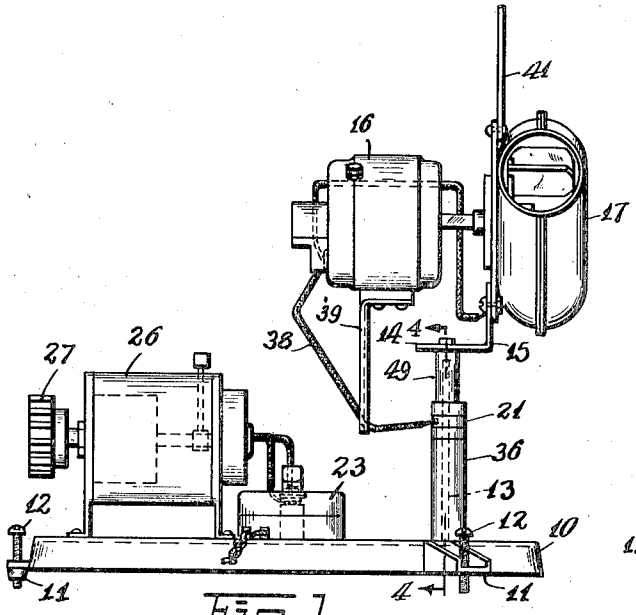


Fig. 1.

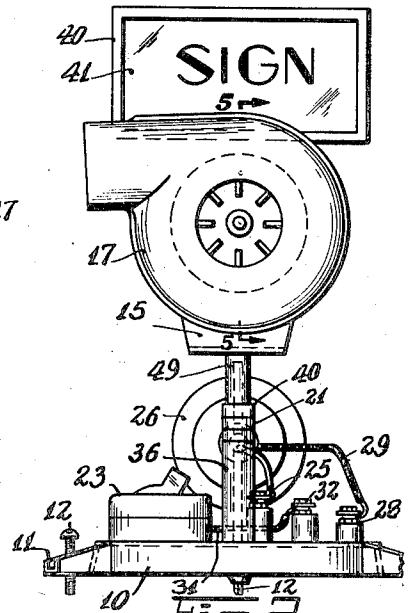


Fig. 2.

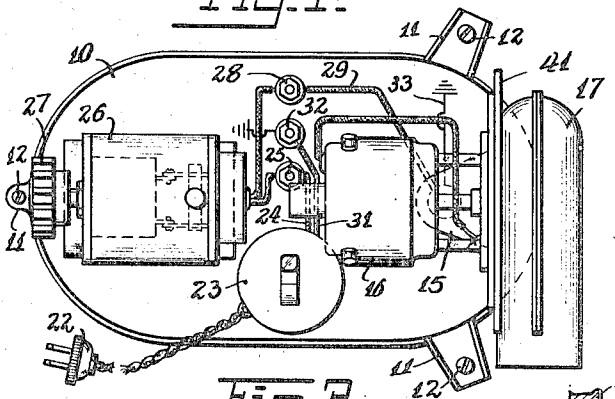


Fig. 3.

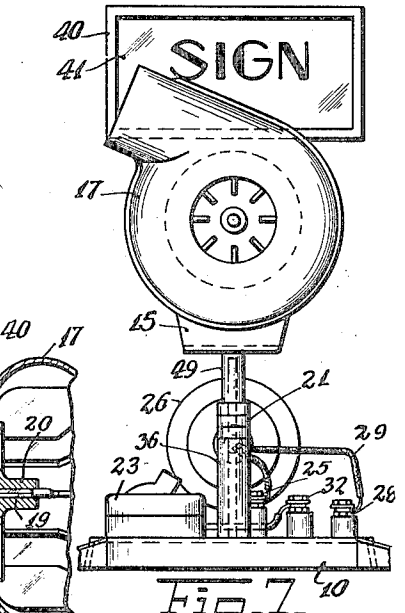


Fig. 7.

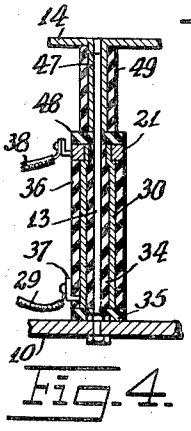


Fig. 4.



Fig. 6.

Fig. 5.

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REVOLVING BLOWER AND SIGN CARD

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9 Claims. (Cl. 40—33)

This invention relates to new and useful improvements in a revolving blower and sign card.

The invention has for an object the construction of a device as mentioned in which the blower is so mounted as to cause the sign card to revolve.

More particularly the invention contemplates the provision of a bracket pivotally mounted and having a vertical offset portion, and the arrangement of a motor driven blower upon said offset portion so as to cause rotation of the bracket upon operation of said blower.

Still further the invention proposes arranging a sign upon said bracket so as to be viewable and rotate along with the blower.

This invention is intended to be used as an advertising and display device. It is intended to be placed within a store window or other place to be viewed by the public and set rotating to attract attention.

Furthermore the invention also contemplates constructing the discharge of the blower in a manner so as to be the prime mover for causing the rotation and still further to adapt the discharging air from the blower to blow objects within a store window or other place so as to add to the attraction of the advertising device. It is generally known that moving objects such as, for example, signs, curtains, etc. attract attention, which will add to the value of the device.

As another object of this invention an arrangement is proposed whereby the blower may be adjusted to change the direction of its discharge for the simultaneous purpose of controlling the speed of rotation of the bracket and directing the air in a desired direction.

Still further the invention contemplates the arrangement of a rheostat associated with the motor so as to provide additional adjustment of the speed of rotation of the device.

As another object of this invention a novel arrangement is proposed whereby the blower may be bodily moved outwards and then rotated into new positions, and when released automatically assume a retracted position which locks it against further motion.

Still further the invention proposes the construction of a device as mentioned which is simple and durable and which may be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a front elevational view of a device constructed according to this invention.

Fig. 2 is a side elevational view of Fig. 1.

Fig. 3 is a plan view of Fig. 1.

Fig. 4 is a fragmentary enlarged vertical sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is an enlarged detailed view of a portion of Fig. 1, certain parts thereof being broken away to illustrate other interior parts.

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 5.

Fig. 7 is a view similar to Fig. 2 but illustrating a blower in a different position of adjustment.

The revolving blower and sign card according to this invention consists of a base 10 adapted to rest upon a flat surface. This base is also provided with several supporting screws so that it may rest upon other surfaces than flat surfaces. More particularly three adjustment screws are provided since three points are the least number which may satisfactorily support an object. The base 10 is provided with several lugs 11 through which the adjustment screws 12 threadedly engage. These adjustment screws also may be used to vary the inclination of the base 10. Preferably the base should be set so that the device operates most efficiently as hereinafter further described.

A vertical post 13 projects from the base 10 and a bracket 14 is rotatably supported upon this post. This bracket has a vertical offset portion 15. A motor 16 is fixed upon one side of the vertical portion 15 and is capable of driving a blower 17 mounted upon the other side of the vertical portion 15.

Cooperative means is arranged upon the motor and blower so as to transfer the rotations from the motor to the blower. More particularly the motor is provided with a shaft 18 having a square portion 19 which engages into a square opening formed in the rotor 20 of the blower. This arrangement also allows the blower 17 to be moved slightly longitudinal relative to the shaft 18 for the purpose as hereinafter further described.

An electric circuit is provided for operating the motor and includes a rotatave conductor ring 21 on the post 13 so that the current may be supplied to the motor during the rotation of the bracket 15. The electric circuit comprises a conventional plug 22 adapted to be plugged into a socket and connected with a switch 23 from which a lead 24 extends to a terminal post 25.

The circuit continues from the terminal post 25 to a carbon type rheostat 26 which may be operated by turning of the handle 27. The circuit continues from the rheostat to the terminal 28 and lead 29 connecting the terminal 28 with a bushing 30 mounted upon the post 23 but insulated from the post. This bushing 30 is formed with a reduced upper end so as to provide a shoulder upon which the ring 21 rotatively sets. A lead 31 connects one of the terminals of the switch 23 with a ground terminal 32. The post 13 is also grounded. This is schematically shown by the ground connection 33 in Fig. 3. In Fig. 4 the post 13 is clearly shown and connected with the base 10 as to constitute the ground connection.

The bushing 30 is mounted upon an insulation bushing 34 mounted upon the post 13. A base insulation washer 35 is also mounted upon the post and serves to support the lower end of the electrical conductor bushing 30 from the base. An insulation covering 36 is mounted upon the bushing 30 so as to cover the bushing from complete exposure. The circuit from the lead 29 connects by a clip 37 with the bushing 30 then to the ring 31 and then to a lead 38 which is extended beneath a supporting finger 39 attached upon the motor 16. The lead 38 electrically connects with one terminal of the motor. The other terminal of the motor is grounded upon the bracket 15.

A sign frame 40 is attached upon the bracket 15 and supports a sign 41, the details of which will not be given. The blower 17 is provided with a flange 42 on one side which is coaxially mounted relative to the center of the roller. This flange 42 rotatively engages within a recess formed in the bracket 15. Interengaging teeth 43 are arranged upon the inner face of the flange 42 and the base of the recess so that the blower may assume rotative positions. A resilient means is provided for engaging the teeth 43. This resilient means comprises a pair of screws 44 engaging through arcuate slots 45 in the bracket 15 and connected upon the flange 42. Springs 46 act between the heads of the screws 44 and the bracket 15 so as to cause the teeth 43 to interengage each other.

The bracket 14 is provided at its bottom with a tubular portion 47 which engages upon the upper end of the post 13 and has its lower end resting upon an insulation washer 48 upon the post 13 and resting on top of the insulation washer 48 upon the post 13 and resting on top of the insulation bushing 34. Another insulation bushing 49 is arranged upon the tubular portion 47. The slots 45 are arranged with their centers of curvature corresponding with the axis of the shaft 18.

The operation of the device is as follows:—The switch 23 must first be turned on and then the rheostat 26 adjusted so that the motor 16 operates at a suitable speed to cause the blower 17 to discharge a stream of air which will rotate the bracket 15. It should be noticed that the blower 17 is formed with a discharge arranged substantially tangential to the axis of rotation of the bracket 15. It is for this reason that the bracket will be caused to rotate. The discharge from the blower will blow against objects within a store window for which the device is intended so as to move certain of these objects to aid in attracting attention. Furthermore the rotation of the entire device will attract attention to the sign 41 which then constitutes an advertisement.

If it is desired to change the speed of rotation of the device the rheostat 20 should be adjusted to control the speed of the motor. If a smaller quantity of air is discharged by the blower the device will rotate slower and conversely if a larger quantity of air is discharged it will rotate faster. Another method of changing the speed of rotation is to change the direction of discharge of the blower 17. Furthermore the direction of discharge can be changed so as to direct the air in a different direction against other objects in the store window. To adjust the blower, the casing thereof should be pulled outwards so that the teeth 43 disengage each other. The springs 46 will be compressed tending to reengage the teeth. The body of the blower may then be turned. When the body of the blower is released the springs 16 will move the blower so that the teeth 43 reengage. The square construction 19 of the shaft 18 and the rotor 20 of the blower allows the blower to be moved to disengage the teeth 43.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket.

2. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said base being provided with adjustable support screws.

3. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the

current to the motor during the rotation of said bracket, an advertising sign being attached upon said post.

4. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said blower being of the rotary type having a tangential discharge.

5. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said electrical circuit including a rheostat for the speed control of the motor.

6. In a device of the class described, a base, a vertical post projecting from said base, a bracket, rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said electric circuit including a lead from said rotative conductor ring to a terminal on said motor, and a finger attached upon said motor engaging against said lead to hold the lead in a fixed position as said bracket rotates.

7. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said blower including an annular casing with a tangential discharge substantially horizontal, and cooperative means upon said casing and bracket for holding the casing in various adjustable positions to direct the discharge at various angles to the horizontal.

8. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said blower including an annular casing with a tangential discharge substantially horizontal, and cooperative means upon said casing and bracket for holding the casing in various adjustable positions to direct the discharge at various angles to the horizontal, a flange projecting from the body of said blower engaging in a recess within said bracket, interengaging teeth upon said flange and recess, resilient means urging the body of said blower to engage said teeth, and cooperative means for connecting the motor and blower so that the blower may be moved longitudinally along its axis to disengage said teeth.

9. In a device of the class described, a base, a vertical post projecting from said base, a bracket rotative on said base and having an offset vertical portion, a motor mounted on one side of said vertical portion and connected with a blower mounted upon the other side, said blower having a discharge adapted to cause rotation of the bracket, cooperative means upon said motor and blower to transfer rotation from the motor to the blower, and an electric circuit for operating the motor including a rotative ring and insulated from the post for supplying the current to the motor during the rotation of said bracket, said blower including an annular casing with a tangential discharge substantially horizontal, and cooperative means upon said casing and bracket for holding the casing in various adjustable positions to direct the discharge at various angles to the horizontal, a flange projecting from the body of said blower engaging in a recess within said bracket, interengaging teeth upon said flange and recess, resilient means urging the body of said blower to engage said teeth, and cooperative means for connecting the motor and blower so that the blower may be moved longitudinally along its axis to disengage said teeth, said resilient means including screws projecting from said flange and engaging through arcuate slots in said bracket, and springs acting between said screws and bracket.

MICHAEL DE MISA.