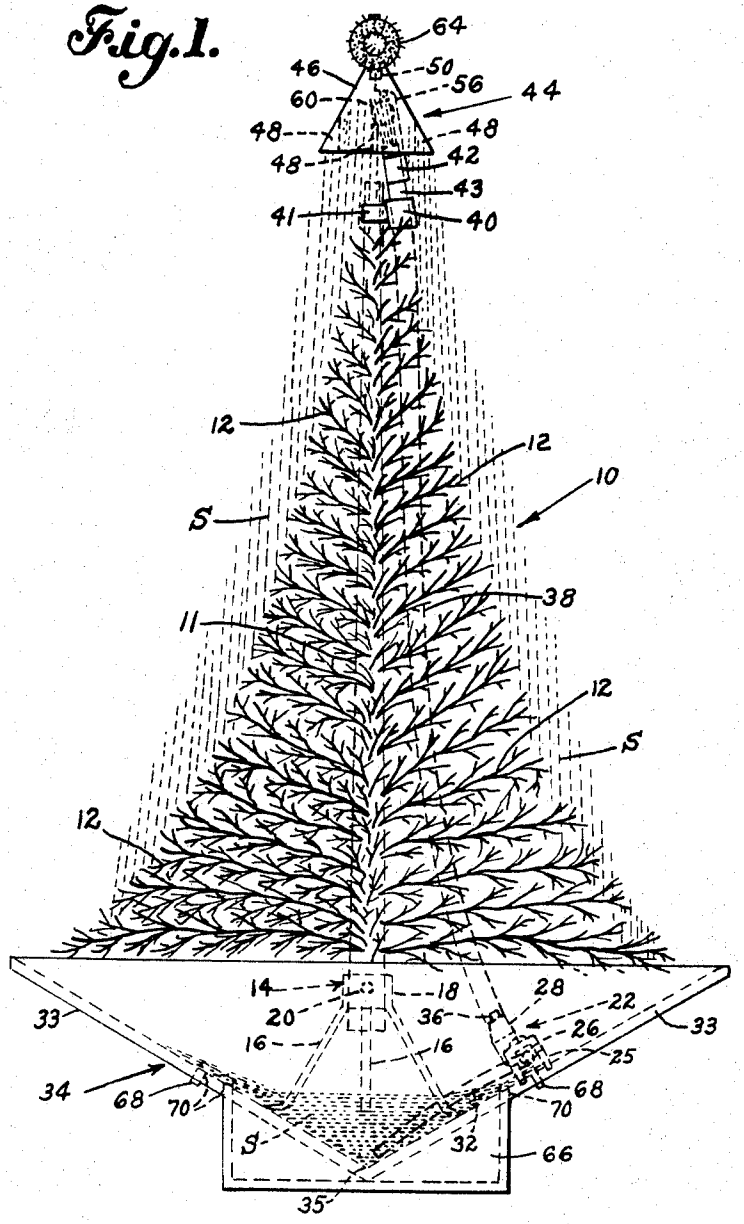
Dec. 10, 1968 J. BURNBAUM 3,415,512

APPARATUS CAUSING ARTIFICIAL SNOWFALL

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Fig. 1.




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Fig. 2.

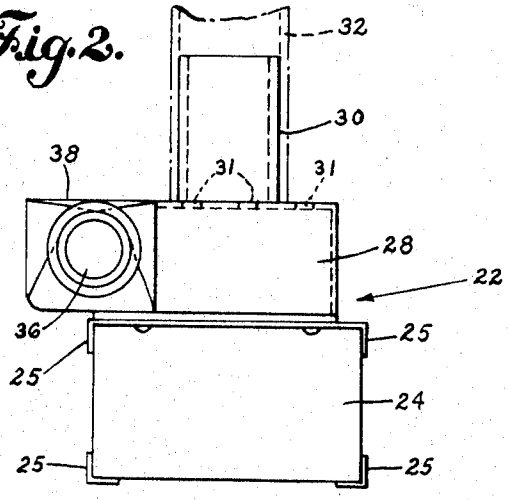



Fig. 3.

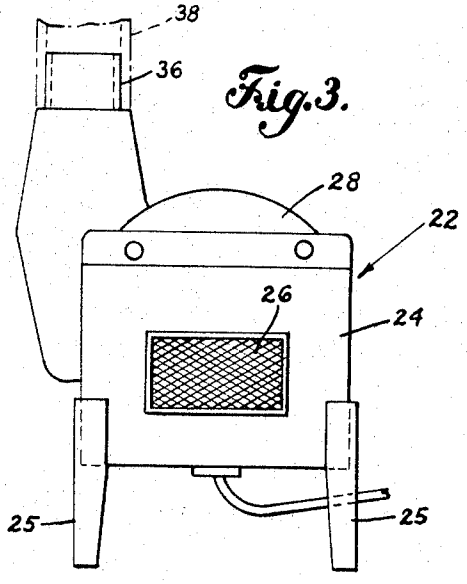
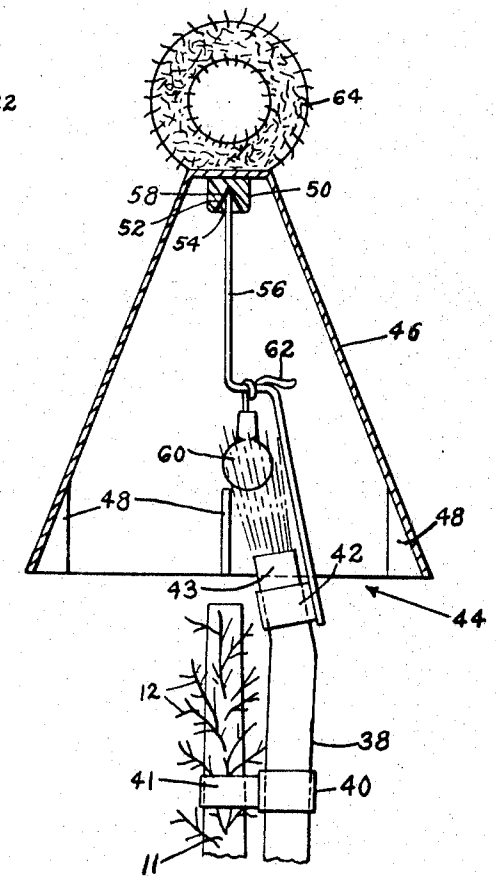



Fig. 4.




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United States Patent Office 3,415,512
Patented Dec. 10, 1968



3,415,512

# APPARATUS CAUSING ARTIFICIAL SNOWFALL

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Filed Jan. 27, 1967, Ser. No. 612,257
6 Claims. (Cl. 272—15)

## ABSTRACT OF THE DISCLOSURE

Apparatus for causing artificial snowfall having an inverted cone collecting receptacle for snow particles, an electrically operated blower, supported on the cone's slanting wall, to blow artificial snowflakes upwardly through an upright conduit to a deflector rotatably supported by said tube and being rotated by air from the blower impinging upon its inner surface. Said snow particles thereafter fall into said receptacle and again are similarly blown upwardly, said movement being repeated indefinitely.

Reference is made to my pending patent application, Ser. No. 572,747, filed Aug. 16, 1966, for Apparatus To Cause Artificial Snowfall.

An outstanding problem in using such apparatus was to provide a continuous, artificial snowfall without the need of human intervention for a relatively long period, such as one-half a day or more, hence the principal object of my invention is to provide apparatus that assures a continuous movement of snow particles, repeatedly blowing them upwardly to a point where they are dispersed and will fall downwardly and thence return to a predetermined point without manual or mechanical assistance, for an indefinite period of time.

Another object is to provide deflector means at the top of my apparatus that is rotated by means of a delivery conduit supplying air and snow particles, and which may carry an ornament, hence an attractive movement is provided by utilizing the normal movement of said air and particles.

The foregoing and other objects, which will appear as the nature of the invention is better understood, may be accomplished by a construction, combination and operative arrangement of parts such as is disclosed by the drawings. The nature of the invention is such as to render it susceptible to various changes and modifications, and, therefore, I am not to be limited to the construction disc'osed by the drawings nor to the particular parts described in the specification; but I am entitled to all such changes therefrom as fall within the scope of my claims.

In the drawings:

FIG. 1 is a front elevational view of an artificial Christmas tree in combination with apparatus to cause artificial snowfall.

FIG. 2 is an enlarged, top plain view of the motor and blower equipment used to operate my apparatus.

FIG. 3 is an enlarged, side elevational view of said motor and blower equipment.

FIG. 4 is a fragmentary, longitudinal sectional view, enlarged, showing deflector means used in my apparatus together with supporting parts connected thereto.

As illustrated, snow display apparatus **10** is shown in connection with a Christmas tree, either artificial or real, that has a trunk or support **11** from which tree branches **12** extend laterally. Said trunk is maintained in position by a well-known tree stand **14** having legs **16** attached to a collar **18** that receives said trunk **11**, the latter being held by a screw **20**.

Actuating means **22** causes movement of the artificial particles S, sometimes herein referred to as snowflakes. Said means **22** has an electric motor **24** provided with



supporting means shown as legs **25**, and an exterior screen **26** to permit entry of air. An electrical wire **27** supplies electrical current to said motor **24**. Said legs **25** penetrate the wall **33** of a collecting receptacle **34**, later described, to firmly support the motor in a predetermined position.

A well-known blower **28** for said actuating means is joined to and operably connected to said motor **24** and it has an air inlet pipe **30** and air inlet opening **31**. A receiving conduit **32** for snow particles, which preferably is flexible, extends from said blower to a lower part of a slanting, circular wall or side **33** of a collecting receptacle **34** shown in the form of an inverted cone having a vertex or converging point **35** and which may be made of cardboard, stiff paper as other material. Said conduit **32** extends to a point closely adjacent said vertex **35** where it picks up the snow particles S that are received by said receptacle and which have passed down and piled up around the lowest point thereof or around said vertex **35**. Since said conduit **32** extends to the point where particles pile up the latter are drawn into it and thence pass through said conduit **30** into said blower **28**.

Outlet means embodies an outlet member **36** that communicates with said blower **28** and also with a delivery conduit **38** extending upwardly alongside said trunk **11**. A collar **40** is attached to said delivery conduit **38** and is integral with an attaching bracket **41** that is attached to said tree trunk **11**. A collar **42** is slidably mounted on an outlet portion **43** of said delivery conduit **38**, which outlet portion preferably slats diagonally upwardly from said collar **42**. Thus air coming out of said outlet portion **43** will strike the inner surface of a deflector **46**, later described, at a slight angle, causing it to rotate.

Above and spaced from said tree trunk **11** is deflector means **44** that assures the return of the snow particles S to said receptacle. Said means **44** has a deflector **46** shown as a truncated cone preferably provided with vanes **48** at its lower edge to promote rotation of said means when air impinges upon them. At the top of said cone **46** is a pivot member **50** having a recess **52** in which a diamond chip **54** or other wear resisting member is set.

Connection between said delivery conduit **38** and said deflector means **44** is effected by a wire support or mounting member **56** attached at one end to said collar **42** as by cement or tape and which provides an upper pointed end **58** that is received in said recess **52** and by said diamond chip **54**. An electric light bulb **60** is supplied with electrical current from an outside source, not shown, through connection to a well-known wire **62** supported by said support **56**. Above said deflector means **44** is an ornament **64**, shown as a wreath, which is attached to said deflector cone **46** as by an adhesive. The latter is merely ornamental and rotates with said deflector means **44**. Said bulb is directly opposite the outlet **43** of said delivery conduit.

An open base **66** resting on a floor may be used to directly support said receptacle **34**. The ends of said base **66**, as shown, are bent and extend through slots **70** formed in said receptacle wall **33** to provide a firm attachment.

In operation, sufficient snow particles S are supplied to said receptacle **34** to provide a continuous, simulated snowfall. Said electric motor **24** is started and said particles S are drawn into said conduit **32** and into said blower **28** and thence into said delivery conduit **38** from which they are discharged against said bulb **60** and into the interior of said deflector **46**. Since said delivery conduit outlet portion **43** extends diagonally air strikes the inner surface or side of said deflector **46** at a slight angle, causing it to rotate. Said vanes **48** also aid in speeding the rate of rotation.

Thence the snow particles S fall from said deflector **46** through the branches of said tree **11** into the interior of

said receptacle where they pass down its slanting wall **33** to the lowest point or to the vertex **35**, where they again are drawn into said conduit **32** to repeat the aforesaid operation.

Either a natural or artificial Christmas tree will serve the purpose. If an artificial tree is used the trunk could be hollow and serve as the supply conduit. If no tree were used an artificial snowfall would be shown with said delivery conduit **38**. If a deflector means were used in that event the support for the deflector means would be said delivery conduit **38**.

Said snowflakes S are preferably provided in the form of plastic pellets which may be round or at least have a curved surface portion so they will roll or slide freely on a downgrade surface such as the wall of said receptacle **34** and not tend to accumulate in a place away from the mouth of said receiving conduit **32**.

What I claim is:

**1**. Apparatus to cause artificial snowfall comprising a collecting receptacle for artificial snowflakes having a downwardly and inwardly slanting side wall being unapertured adjacent the lowest point thereof, blower actuating means within and supported by said receptacle, said actuating means embodying inlet means and outlet means, delivery conduit means communicating with said outlet means adapted to respectively receive and discharge said artificial snowflakes upon actuation of said actuating means, deflector means positioned above and supported by said delivery conduit means and said receptacle adapted to deflect said snowflakes passing out of said delivery conduit means whereby the snowflakes return by gravity to the collecting receptacle, said actuating means having a motor positioned on said slanting side wall intermediate the upper and lower extremities thereof, said inlet means embodying a receiving conduit within said receptacle extending to a point adjacent the lowest point of said receptacle and said artificial snowflakes being in the form of pellets having curved surface portions so shaped as to move downwardly on said side wall.

**2**. Apparatus to cause artificial snowfall as set forth in claim **1**, said receptacle being of substantially pyramid shape having an apex that constitutes the bottom of said pyramid in position of use, said receiving conduit terminating at a point adjacent, but spaced from, said apex.

**3**. Apparatus to cause artificial snowfall as set forth in claim **1**, said receiving conduit being elongate and extending substantially diagonally downward from said actuating means and above said side wall.



**4**. Apparatus to cause artificial snowfall as set forth in claim **1**, said means embodying a motor having supporting legs extending through said side wall.

**5**. Apparatus to cause artificial snowfall as set forth in claim **1**, and a tree stand having supporting legs, the latter resting on said slanting side wall at points spaced upwardly from the bottom extremity of said receptacle.

**6**. Apparatus to cause artificial snowfall comprising a collecting receptacle for artificial snowflakes having a downwardly and inwardly slanting side wall being unapertured adjacent the lowest point thereof, blower actuating means within and supported by said receptacle, said actuating means embodying inlet means and outlet means, delivery conduit means communicating with said outlet means adapted to respectively receive and discharge said artificial snowflakes upon actuation of said actuating means, said actuating means having a motor positioned on said slanting side wall intermediate the upper and lower extremities thereof, said inlet means embodying a receiving conduit within said receptacle extending to a point adjacent the lowest point of said receptacle and said artificial snowflakes being in the form of pellets having curved surface portions so shaped as to move downwardly on said side wall.


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U.S. Cl. X.R.

40—37, 106.25; 239—2, 398; 161—22