Nov. 28, 1961 F. BARRETT 3,010,660

DEVICE FOR MAKING SNOW

Filed Oct. 10, 1958

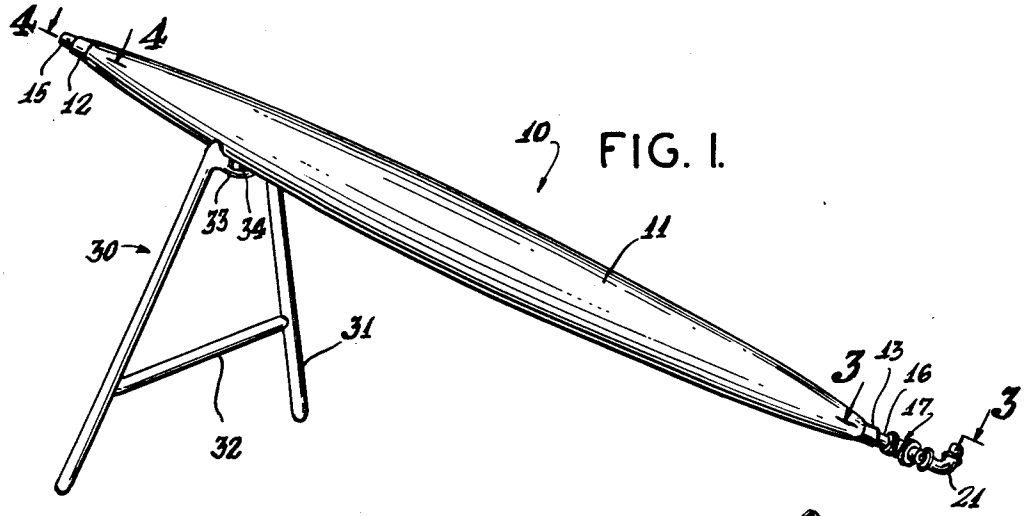


FIG. 1.

FIG. 2.

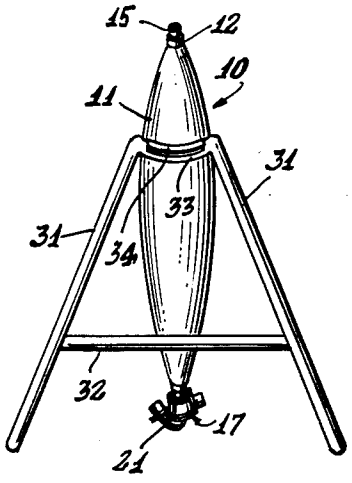


FIG. 3.

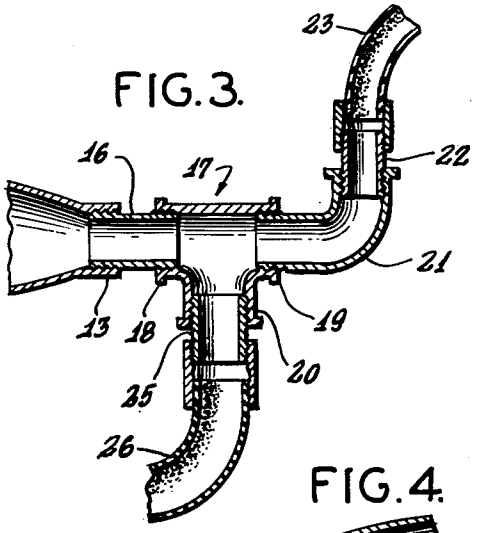


FIG. 4.

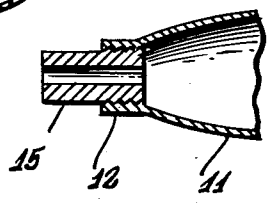
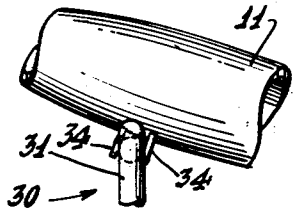


FIG. 5.



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DEVICE FOR MAKING SNOW

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4 Claims. (Cl. 239—434)

This invention relates to a device for making snow.

An object of this invention is to provide an improved apparatus of the character described, which will make snow in such a way that it will not freeze at low temperatures, it having been found that prior artificial snow-making devices have a tendency to freeze when the temperature gets down to about 20° F. or lower.

Another object of this invention is to provide an apparatus of the character described, for artificially making snow, an elongated tubular body, tapered at its inlet and outlet ends, with means to supply air under pressure and water under pressure to the inlet end, such a construction permitting snow to be formed inside the body and to come out in spray form from the outlet end of the body.

Another object of this invention is to provide a strong, rugged and durable device which is relatively inexpensive to manufacture, easy to manipulate, and which shall yet be practical and efficient to a high degree and use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combination of elements, and arrangement of parts, which shall be exemplified in the construction hereinafter described, and of which the scope of invention will be indicated in the following claims.

In the accompanying drawings in which is shown various illustrative embodiments of this invention,

FIG. 1 is a perspective view of the apparatus embodying the invention;

FIG. 2 is a front elevational view thereof;

FIG. 3 is an enlarged cross-sectional view taken along line 3—3 of FIG. 1;

FIG. 4 is an enlarged cross-sectional view taken along line 4—4 of FIG. 1; and

FIG. 5 is a partial side elevational view illustrating the support of the body of the apparatus.

Referring now in detail to the drawing, **10** designates the apparatus embodying the invention for making snow. The same comprises a body **11**, which may be made of metal, and is elongated and tapers to narrowing cross-section at both ends. The body **11** is hollow or tubular and may be of round cross-section. At its front end the body **11** is formed with an internally threaded outlet tubular portion **12**, and at its rear end with an internally threaded tubular inlet portion **13**. The body **11** between the portions **12** and **13** may be of longitudinal curved shape being widest at its middle and narrowest at its end. The body comprises a mixing chamber as will appear hereinafter.

Screwed to the front end portion **12** is a short outlet nipple **15** constituting a discharge nozzle. Screwed to the rear end **13** is a short nipple **16** to which is screwed a T-connection or fitting **17**. The T-connection has one end or branch **18** screwed at the nipple **16** and an opposite end or branch **19**. The T-connection **17** has a branch **20** at right angles to the branches **18** and **19**. Screwed to the branch **19** is an elbow **21** to which is screwed a nipple **22**. Connected to the nipple **22** is a compressed air line **23** which may carry compressed air, at about 100 pounds pressure, to the apparatus.

Screwed to the branch **20** is a nipple **25**, to which is attached a water line **26**, which may supply water, at from 60–80 pounds pressure, to the apparatus.

The body or mixing chamber **11** may be supported in upwardly inclined position on a leg support **30**. Leg support **30** may comprise a pair of outwardly inclined legs **31** interconnected by a cross-brace **32**. The upper ends of the legs **31** are interconnected by a curved portion **33** which may engage the body **11**, being received between a pair of spaced abutments **34** on the underside of said body.

It is found that when the temperature is below freezing a supply of air under pressure and water under pressure, as indicated, will result in snow coming out in spray form from the discharge nozzle **15**. The snow is formed within the mixing chamber **11** and comes out in the form of a spray. It has been found that in the present apparatus snow is created in a way that it will not freeze at low temperatures, that is, below 20° F.

The body **11** may be about 60 inches in length and about 4½ inches in diameter at the middle. The discharge nozzle **15** may be a ¾ inch pipe. The inlet member **16** may be a 1 inch pipe. The T-connection **17** may also be about a 1 inch T. The elbow **21** may also be substantially a 1 inch elbow. It is preferable that about a foot in length at opposite ends of the body taper more sharply than the portion inbetween.

It will thus be seen that there is provided an apparatus in which the several objects of this invention are achieved and which is well adapted to meet the condition of practical use.

As possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. An apparatus for making snow comprising an elongated tubular body tapering downwardly at both ends and formed with an inlet opening at one end and an outlet opening at the opposite end, a nipple screwed to the inlet end of the body, a T having a branch screwed to the nipple, an elbow screwed to the opposite branch of the T, means to supply air under pressure, attached to said elbow, and means to supply water under pressure attached to the offset branch of said T.

2. An apparatus for making snow comprising an elongated tubular body tapering toward opposite ends, a T-connection having a pair of opposite aligned branches, and a third branch at right angles to said pair of branches, one of said pair of branches being attached to one end of the body, means to supply water under pressure to said third branch of the T, an elbow having one branch attached to the other of said pair of branches of the T, and means attached to the other branch of said elbow, to supply air under pressure to said elbow.

3. Apparatus for making snow comprising an elongated tubular body of curved longitudinal cross-section narrowing outwardly toward its opposite ends, a restricted outlet nozzle attached to one end of the body, an inlet conduit attached to the opposite end of the body and extending longitudinally of the body, a second conduit at an angle to the first conduit and communicating therewith, means to supply water under pressure to the second conduit, and a third conduit at an angle to the first conduit and offset longitudinally from the second conduit, and communicating with the first conduit and means to supply air under pressure to the third conduit.

4. The combination of claim 3, in combination with means to support said body in an upwardly and forwardly inclined position, said means comprising a support inclined upwardly and rearwardly and having an upper end engaging the underside of the body closer to the forward upper end of the body than to its rear lower end.

(References on following page)

References Cited in the file of this patent

UNITED STATES PATENTS

1,562,194	Schaefer	Nov. 17, 1925
1,667,342	Blaw	Apr. 24, 1928
1,962,263	Tracy	June 12, 1934
2,254,123	Soaper	Aug. 26, 1941
2,309,247	Johnson	Jan. 26, 1943
2,366,969	Kiggins	Jan. 9, 1945
2,477,204	Ravine	July 26, 1949
2,585,004	Gillespie et al.	Feb. 12, 1952
2,676,471	Pierce	Apr. 27, 1954
2,761,516	Vassilkovsky	Sept. 4, 1956