C. COTTON AND I. L. RODSTROM.

BLOWER TIP.

APPLICATION FILED MAR. 21, 1922.

1,438,902. Patented Dec. 12, 1922.

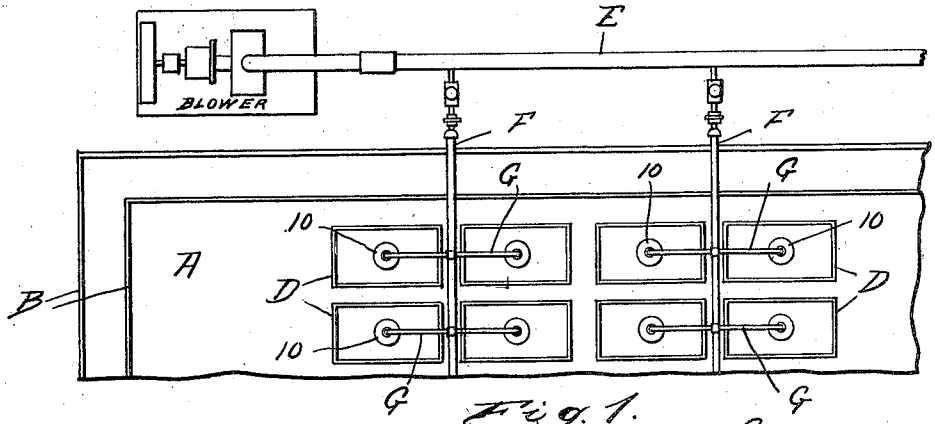


Fig. 1.

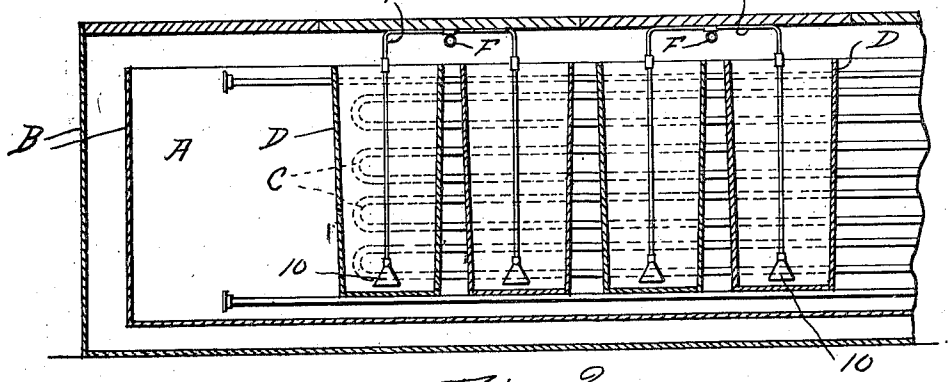


Fig. 2.

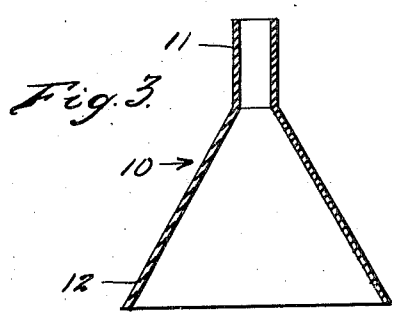


Fig. 3.

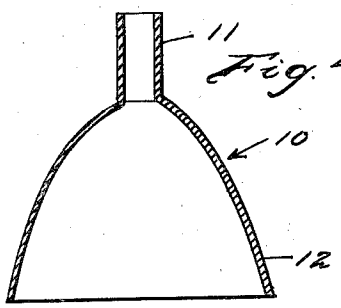


Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES COTTON AND INGLE L. RODSTROM, OF McCOOK, NEBRASKA.

BLOWER TIP.

Application filed March 21, 1922. Serial No. 545,440.

To all whom it may concern:

Be it known that we, CHARLES COTTON and INGLE L. RODSTROM, citizens of the United States, residing at McCook, in the county of Redwillow and State of Nebraska, have invented new and useful Improvements in Blower Tips, of which the following is a specification.

This invention relates to ice making machinery or plants and has for its object the provision of a novel blower tip for the air pipes which are provided for the purpose of agitating the water in the ice cans, this tip being of peculiar formation whereby to prevent freezing of the moisture in the air and consequent clogging of the pipe.

An important and more specific object is the provision of a tip of a bell-like formation which will permit sufficient expansion of the air issuing therefrom to prevent freezing, this tip being associated with the ordinary pipe commonly used.

A further object is the provision of a tip of this character which will be very simple and inexpensive in manufacture, highly efficient in use, positive in action and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which:

Figure 1 is a plan view of a portion of an ice making plant showing our invention in use,

Figure 2 is a sectional view therethrough,

Figure 3 is a detail section through the blower tip shown in Figures 1 and 2 and

Figure 4 is a sectional view through a modified form.

Referring more particularly to the drawings the letter A designates a portion of the freezing tank of an ice plant, this tank having the usual heat insulated walls B and being for the purpose of containing the brine within which are immersed the coils C through which the liquefied ammonia passes. The letter D designates the ice cans which are of course initially filled with water. The letter E represents the air header pipe which is supplied with compressed air from a blower or any suitable pump. Connected with this header pipe E are distributer pipes F from which lead branch pipes G which extend down into the cans D for the purpose of supplying compressed air to the water within the cans for effecting agitation of the water so as to insure the production of clear ice.

It is well known that the compressed air is frequently moist and the moisture often freezes at the discharge end of the outlet pipe which results in clogging the pipe so that the air cannot pass therefrom. To overcome this defect we make use of a tip designated broadly by numeral 10, this tip being of a bell-like or funnel shape and including a constricted neck portion 11 which is slidably engaged upon the pipe G and which remains in position merely by frictional engagement. The tip further includes the enlarged or flaring bottom portion 12 which is of course open at the end opposite the neck. It is obvious that the tip might be made in a wide variety of shapes and sizes and that it may be constructed of any suitable material, such as metal fiber, celluloid or rubber, but in actual practice we have found that rubber is the most satisfactory material.

In use the tip is slipped onto the outlet end of the pipe G and is disposed within the water in the ice can. The compressed air issuing from the pipe G must naturally pass through the tip and owing to the size and particular formation of the tip we have found that there will be no freezing of the moisture within the air passing out of the tip and that consequently there will be no clogging of the discharge pipe.

From the foregoing description and a study of the drawings it will be apparent that we have thus provided an extremely simple and consequently inexpensive blower tip which will be of manifest advantage in the manufacture of ice as insuring the proper flow of the necessary agitating air into the ice cans.

While we have shown and described the preferred embodiment of the invention, it is of course to be understood that we reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of invention or the scope of the subjoined claim.

Having thus described the invention, we claim:

The combination with the compressed air

discharge pipes of an ice plant, said pipes leading down into the ice cans located within the freezing tank of the plant; of a bell like blower tip detachably engaged upon each discharge pipe and including a constricted upper portion defining a combined inlet and neck frictionally engaged upon the discharge pipe and having its lower end flaring to define a relatively large outlet.

In testimony whereof we affix our signatures.

CHARLES COTTON.
INGLE L. RODSTROM.