

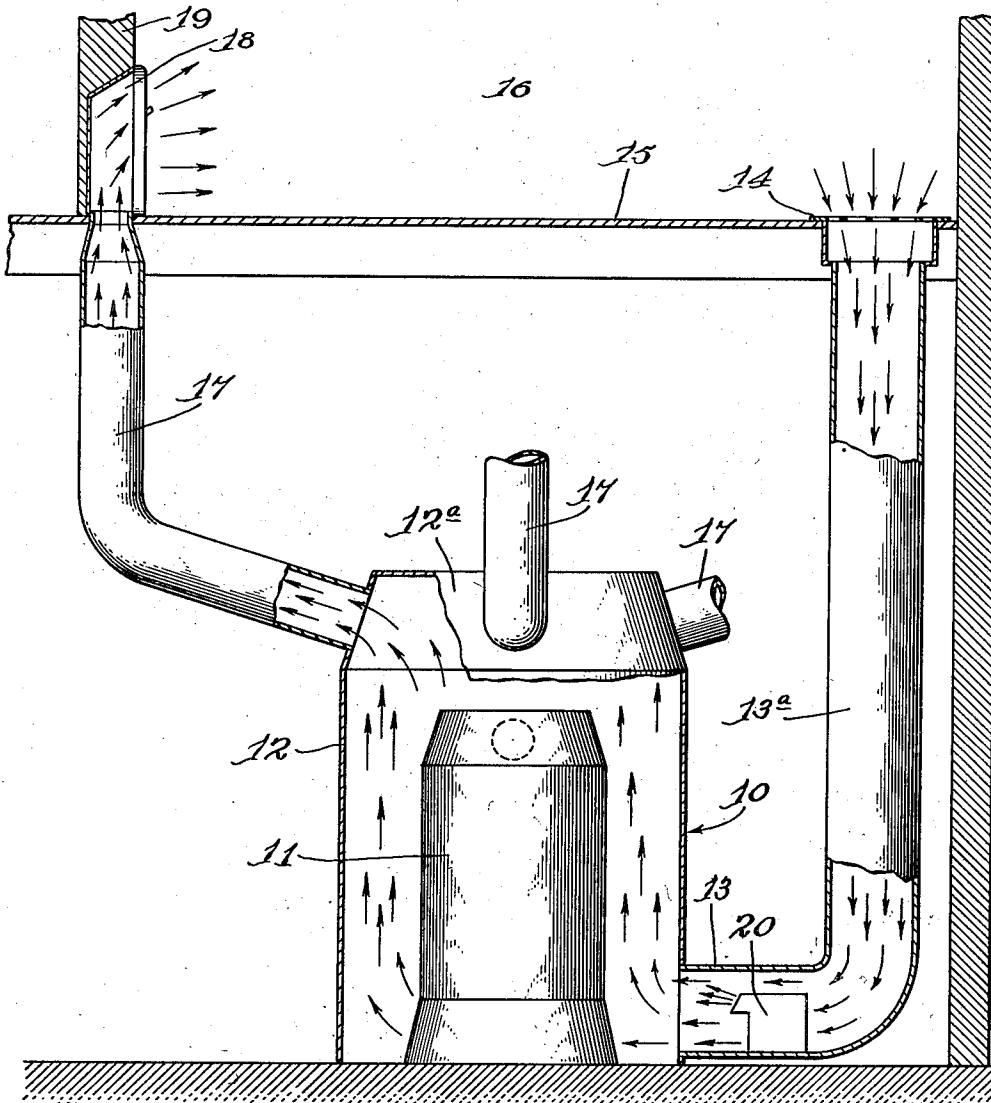
Oct. 24, 1933.

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1,932,379

METHOD OF CONDITIONING AIR

Filed Aug. 3, 1931



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UNITED STATES PATENT OFFICE

1,932,379

METHOD OF CONDITIONING AIR

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Application August 3, 1931. Serial No. 554,912

1 Claim. (Cl. 167—3)

This invention relates to means and method for conditioning air and, more especially, the conditioning of air by treating the same with ozone.

5 It is well known that ozone in air has certain beneficial effects upon the same. Excess of ozone, however, is objectionable. It is difficult, therefore, in conditioning air to introduce into the same just the right amount to give the proper effect on the air without producing an objection-
10 able excess.

By the use of my invention, as explained more in detail hereinafter, I am able to condition air by supplying thereto a requisite amount of ozone
15 to accomplish the desired results without permitting an excess to remain therein where the same will be objectionable.

In general, my improved method of conditioning air consists of first introducing into the air
20 an amount of ozone in excess of that required to give the desired air condition and then heating the air to remove the excess ozone before the air is used.

The method of conditioning air in accordance
25 with my invention is capable of many modifications and variations, and I have illustrated merely one as an example. In order to show this method, I have also illustrated a certain form of apparatus which likewise is subject to mod-
30 ifications and variations without departing from the spirit of my invention.

In the accompanying drawing, I have shown in vertical section a form of apparatus that may be employed in the practice of my invention.

35 As shown in the drawing, 10 may indicate, in general, a furnace of the warm air type including a radiator or casting 11 with any suitable means (not shown) for heating the same. The radiator 11 is surrounded by the casing 12 so that air cir-
40 culating therethrough, as shown by the arrows, will be warmed by the radiator.

Numerals 13 may indicate the boot or cold air duct leading into the furnace, the same being connected by the pipe 13^a to the cold air register
45 14 in the floor 15 of the room 16. Warm air is permitted to flow from the bonnet 12^a of the casing through the warm air pipes 17, 17. For the purpose of illustration, I have shown one of these pipes leading to the warm air register 18
50 in the wall 19 of the room 16.

Numerals 20 indicates an ozone generator which may be of any type. It is to be understood that this generator will generate ozone and liberate the same in the stream of air flowing through the
55 boot 13 into the furnace. In the practice of my

invention, the generator 20 will generate and introduce into the air an amount of ozone in excess of that required to give the desired air condition. Immediately upon leaving the boot 13, the ozone-laden air goes into the casing 12 where
60 it is heated by the radiator 11. This heating of the air will remove any objectionable excess ozone remaining in the air after the air has been properly conditioned. It will be seen, therefore, that the air issuing from the register 18 will have
65 been treated by ozone; and that no objectionable excess ozone will be contained in such air.

It is to be noted that the treating or conditioning of the air referred to occurs before the air is heated to remove the objectionable excess ozone.
70 It is believed that in treating or conditioning air by ozone, the ozone destroys the bacteria and odors in the air. In order to destroy substantially all bacteria and odors within a reasonable period it is necessary to introduce a relatively
75 large amount of ozone with the result that some objectionable excess of ozone will remain in the air and be injurious to people unless such objectionable excess is removed. One of the ob-
80 jects of this invention, therefore, is to produce a great abundance of ozone in sufficient quantities to quickly destroy bacteria and odors and then removing the objectionable excess of ozone before the air is breathed by people. Ozone is
85 rapidly destroyed at 350° F. With lower temperatures a greater time is required for the destroying of ozone. There is quite a considerable time involved in the passage of air through a furnace as shown in the drawing so that even at tem-
90 peratures considerably below 350° F. the objectionable excess of ozone is destroyed or removed.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and ar-
95 rangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claim, in which it is my intention to claim all novelty inherent in my invention as broadly as permissible, in view of the
100 prior art.

What I regard as new, and desire to secure by Letters Patent, is:

The method of conditioning air consisting of first introducing into the air an amount of ozone
105 in excess of that required to give the desired air condition and then heating the air to remove the objectionable excess ozone remaining in the air after the latter has been conditioned.

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