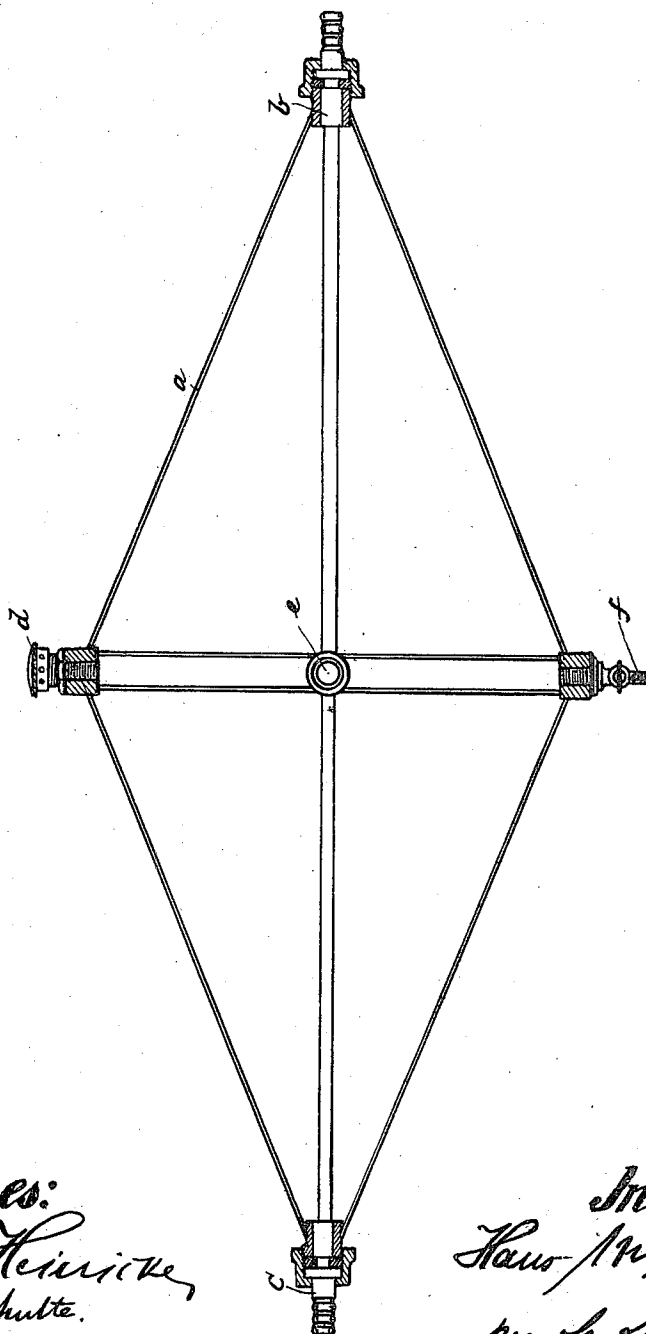


H. MIKOREY.
AIR SPRAYING TANK.
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964,114.

Patented July 12, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

HANS MIKOREY, OF SCHÖNEBERG, NEAR BERLIN, GERMANY, ASSIGNOR TO THE FIRM
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AIR-SPRAYING TANK.

964,114.

Specification of Letters Patent.

Patented July 12, 1910.

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To all whom it may concern:

Be it known that I, HANS MIKOREY, a subject of the German Emperor, and a resident of 13 Wartburgstrasse, in the city of Schöneberg, near Berlin, Kingdom of Prussia and German Empire, have invented a certain new and useful Air-Spraying Tank, of which the following is a specification.

The subject matter of this invention is an air tank which is particularly intended for use for paint or color spraying or dispersing plants and which, besides serving the well known purpose of insuring a balancing of the pressure prevailing in the pipe conduit, is also intended to produce a purification of the air to be admitted to the paint dispersers or to other appliances operated by compressed air. With this end in view the air tank is made so as to present zones of different cross-sections, that is to say, it widens more and more from the mouth piece, where the supply pipe is connected, and gradually narrows toward the exit. Accordingly the velocity of the entering air decreases gradually, the velocity being almost zero at about the middle of the air tank, and finally assuming the same speed at the escape end of the air tank, which it had at the entrance end of the air tank. By means of this arrangement the effect is produced of creating on the one hand a collecting chamber for the water, separated from the air in consequence of variations of temperature and that on the other hand as a result of a decrease of velocity in the movement of the air, all the admixtures of the air which are specifically heavier than air, are caused to settle down in the zone of greatest cross-section. The separation of impurities is moreover assisted by the fact that the air in motion impinges against the walls of the air tank, situated at an angle to its direction of flow, when its velocity increases again, so that an impact action is produced. The air admitted into the apparatus operated by air under pressure has therefore undergone a thorough purification.

Upon the drawing a form of construction of the subject matter of the invention is

shown in cross-section as an example having the shape of a double cone.

a is the outer shell of the air chamber or air tank, in shape of two cones connected at their bases. The ends *b* and *c* of the air tank are arranged so as to serve respectively for the entrance and for the discharge of the air. Upon the air tank, a safety valve is mounted at *d* and at *e* a pressure gage is connected to the tank.

At *f* a cleaning opening, provided with a cock, is arranged.

It is deemed important that the safety valve, the pressure gage and the cleaning opening be provided at the lowest point of the zone of the largest cross sectional area of the tank and that the provision for the inlet and escape of air be disposed at the apices of the cones, for by the construction of tank shown all the admixtures of the air which are specifically heavier than air are caused to settle down in the zone of greatest cross section and it is at this point that it is necessary to have the safety valve and the cleaning opening.

The two sections of the air tank need not have exactly the same shape. It is evident that one section of the air tank might be cone shaped while the other section is made in shape of a calotte or part of a sphere.

Having thus described my invention, what I claim is:

1. A tank for the purpose described, comprising an outer shell consisting of two cones connected at their bases, air inlets and outlets at opposite ends of the tank, a safety valve at one side of the shorter diameter thereof in the connection between the bases of said cones, and a valve controlled cleaning opening at the opposite side in the connection between the bases of said cones.

2. A tank for the purpose described, comprising an outer shell consisting of two cones connected at their bases, air inlets and outlets at opposite ends of the tank, a safety valve at one side of the shorter diameter thereof in the connection between the bases of said cones, a valve controlled cleaning opening at the opposite side in the connection between the bases of said cones, and a

pressure gage connected to said tank between the safety valve and cleaning opening in the connection between the bases of said cones.

3. An air pressure equalizing tank for use
5 with color dispersers, the same comprising two cone-shaped members connected at their bases, means for entrance and escape of air disposed at the apices of said cones and pro-

vided with a cleaning opening and a closure therefor at the lowest point of the zone of 10 largest cross sectional area.

In testimony whereof I affix my signature.

HANS MIKOREY.

In the presence of—

WOLDEMAR HAUPT,

HENRY HASPER.