J. KOLTKO.

SMOKE DIFFUSING APPARATUS.

APPLICATION FILED APR. 17, 1918.

1,278,170.

Patented Sept. 10, 1918.

2 SHEETS—SHEET 1.

Fig. 1

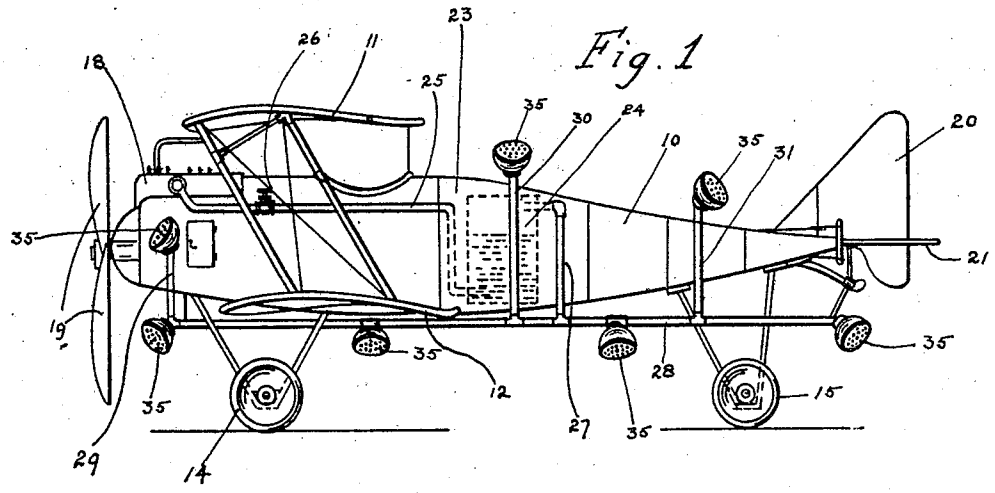
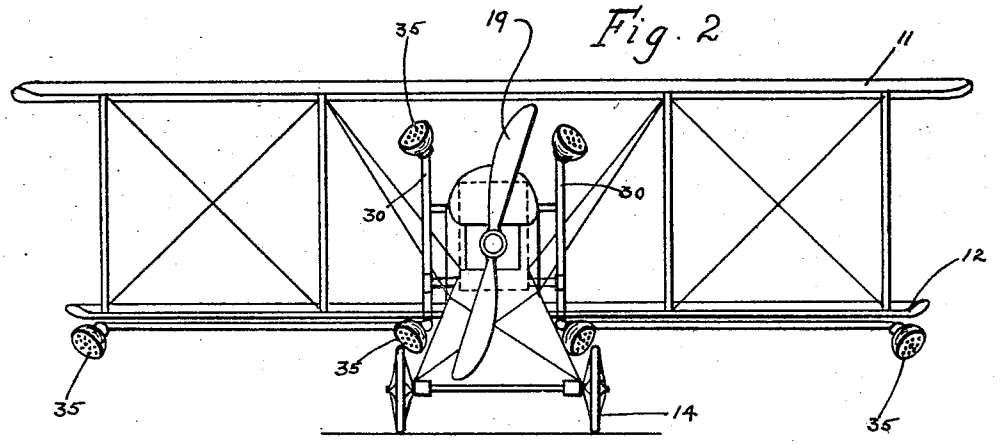


Fig. 2



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2 SHEETS—SHEET 2.

Fig. 4.

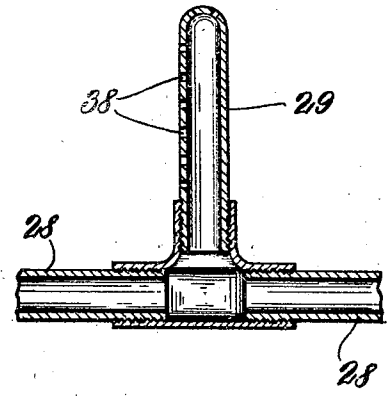


Fig. 5.

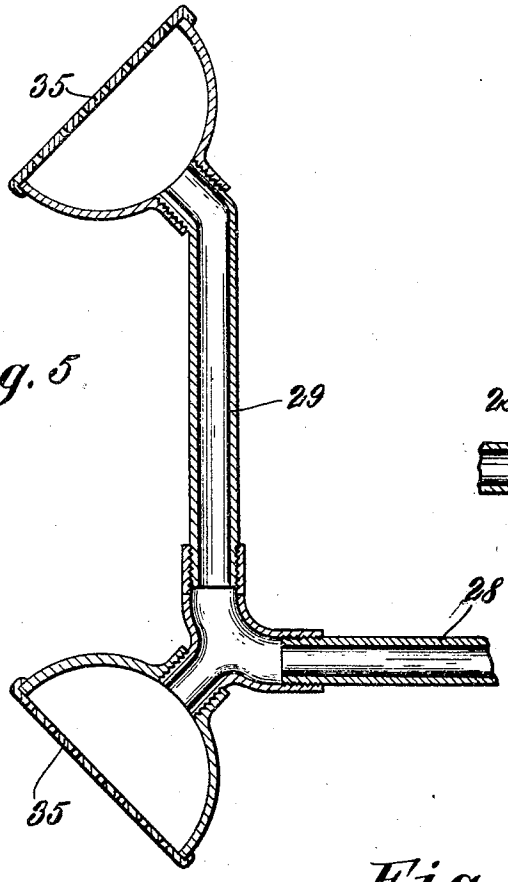
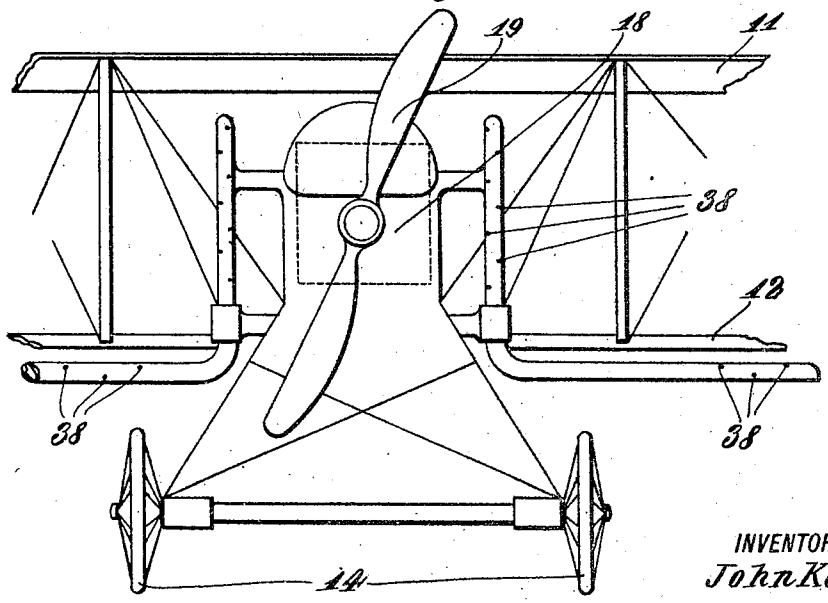


Fig. 3.



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JOHN KOLTKO, OF WATERTOWN, CONNECTICUT.

SMOKE-DIFFUSING APPARATUS.

1,278,170. Specification of Letters Patent. Patented Sept. 10, 1918.

Application filed April 17, 1918. Serial No. 229,123.

To all whom it may concern:

Be it known that I, JOHN KOLTKO, a citizen of Ukraina, residing at Watertown, county of Litchfield, and State of Connecticut, have invented certain new and useful Improvements in Smoke-Diffusing Apparatus, of which the following is a specification.

This invention relates to improvements in devices for diffusing smoke and particularly to types adapted to be used in connection with flying machines.

The principal object of the invention is to provide means combined with the flying machine, whereby a cloud of smoke or the like is diffused in such quantities as to obscure the flying machine and its occupants.

A further object is to provide means, carried by the flying machine, in which certain chemicals are acted upon by the gases from the motor for producing smoke in a great volume.

These and other like objects are attained by the novel construction and combination of parts hereinafter described and shown in the accompanying drawings, forming a material part of this specification, and in which:—

Figure 1 is a side elevational view showing a flying machine provided with a smoke diffusing apparatus made in accordance with the invention.

Fig. 2 is a front elevational view of the same.

Fig. 3 is an enlarged fragmentary front elevational view, showing a modified form of diffusing apparatus.

Fig. 4 is a fragmentary sectional view of the diffusing heads, and

Fig. 5 is a similar sectional view of the heads as shown in Figs. 1 and 2.

In the drawings, the body of the flying machine is indicated by the numeral 10, here shown to be a bi-plane having upper and lower planes, respectively 11 and 12, the body being mounted upon a pair of wheels 14, at the front, and a single wheel 15 at the rear as is usual. At the front of the machine is the motor indicated by the numeral 18, the motor driving a propeller 19.

A pair of vertical horizontal rudders, respectively 20 and 21, are arranged at the rear of the machine.

Within the body is a compartment 23 containing a tank 24 through which connections are made by the pipe 25, controlled by the valve 26 with the motor 18, the tank carrying certain chemicals which furnish a great amount of dark colored smoke or vapor, the same passing out through the pipes 27 upon either side of the apparatus engaging with longitudinally disposed pipes 28, having branched vertical pipes 29, 30 and 31 connecting with the main pipe 28, while at the ends of these pipes are perforated heads 35. Also disposed at intervals in the pipes 28 are other heads 35 having fine perforations and adapted to distribute the smoke issuing therefrom in all directions.

These heads are so placed with relation to the body of the machine that the issuing smoke is relatively widely distributed, forming a cloud completely obscuring the machine from all points, rendering the apparatus and its occupants totally invisible.

Obviously as many diffusing heads as may be desired may be employed while the contents of the tank 24 may be readily refilled at convenient intervals.

In the modified form of diffuser, shown in Figs. 3 and 4, the heads are dispensed with and the pipes themselves drilled or otherwise perforated, the openings 38 being directed outwardly as indicated.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:

1. In a smoke diffusing apparatus, the combination with a flying machine, and a motor operating therein, of a tank set in the body of said flying machine, connections between the exhaust of said motor and said tank, a plurality of diffusing heads engaged with said tank upon each side of said machine, and chemicals carried in said tank adapted to create an obscuring cloud when brought into connection with the gases from said motor.

2. In a smoke diffusing apparatus, the combination with a flying machine and a motor by which it is driven, of a tank set amidship in said flying machine, said tank containing chemicals adapted to cause a cloud, connections between said tank and the exhaust of said motor, a plurality of pipes extending longitudinally of said flying machine and heads inserted at intervals in said pipes, said heads having perforate outlets permitting a smoke cloud to pass outward.

3. In a smoke diffusing apparatus, the combination with a flying machine and a

motor by which it is driven, of a tank in said flying machine, connections between the exhaust of said motor and said tank, horizontal pipes secured longitudinally of the body of said machine, vertical pipes connected therewith, a plurality of perforate heads engaged at the extremity of said vertical pipes and at intervals along said horizontal pipes, a combination of chemicals carried in said tank, which when brought into connection with gases from said motor, cause an obscuring cloud to issue from said perforate heads, and means for controlling the admission of the exhaust of said motor to said tank.

In testimony whereof I have affixed my signature.

JOHN KOLTKO.