I. J. Hendryx,

Air Blower.

No. 16,645. Patented Feb. 17, 1857.

Fig. 1.

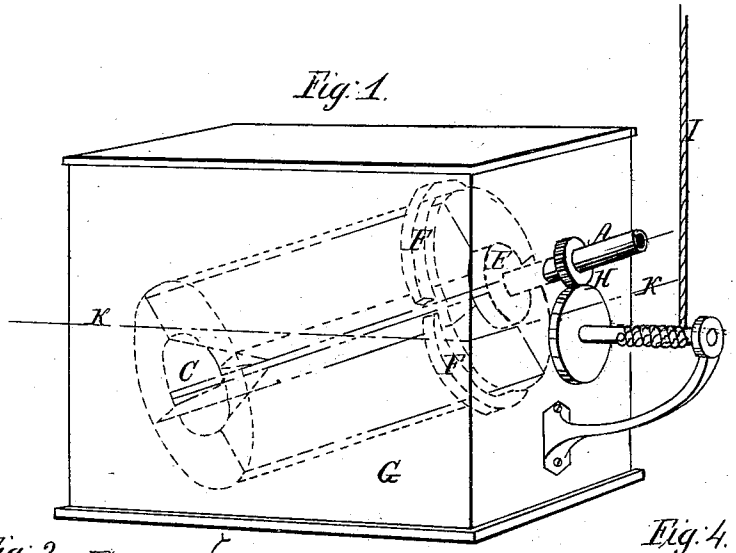


Fig. 2.

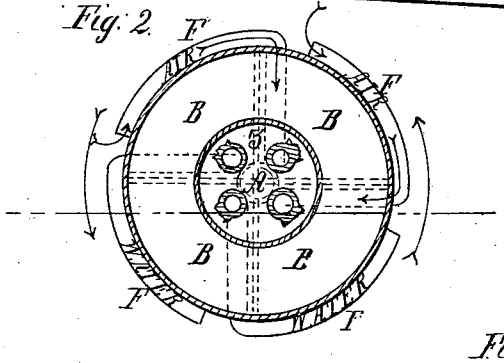


Fig. 4.

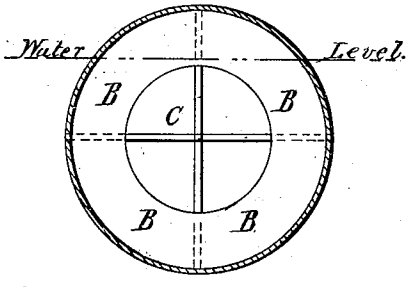
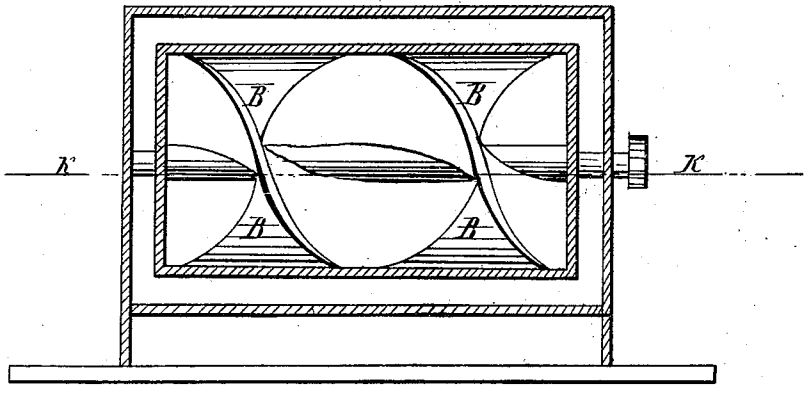


Fig. 3.



UNITED STATES PATENT OFFICE.

ISAIAH J. HENDRYX, OF TROY, NEW YORK.

METHOD OF GENERATING AIR-BLASTS.

Specification of Letters Patent No. 16,645, dated February 17, 1857.

To all whom it may concern:

Be it known that I, ISAIAH J. HENDRYX, of the city, county, and State of New York, have invented a new and useful machine for the purpose of passing a current of air through hydrocarbons and their vapors and generating gas thereby, also for other purposes requiring a steady blast; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in constructing a cylinder divided into compartments, with a hollow shaft in its center, said cylinder being revolved at an angle of 40° or 45° or any suitable angle in water or other liquor, or by placing the liquor inside the cylinder and revolving it, all the air above the water line is forced out through the hollow shaft.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

References to the drawings: Figure 1 shows a section of the machine; A, hollow shaft; E, air chamber over the valves; F, air pipes for supplying the cylinder; C, opening at the immersed end of the cylinder; H, gearing for revolving the cylinder; I, weight; J, shows the position of the cylinder; K, water line; G, water vessel.

Fig. 2 shows the elevated end of the cylinder; B, compartments; F, air pipes.

Fig. 3 shows the position of the valves and air pipes on the elevated end of the cylinder.

Fig. 4 shows the immersed end of the cylinder with the opening C.

I construct my cylinder with a hollow shaft in its center as shown at A, Fig. 1, and divided into compartments, B, Fig. 2, either on a line with the shaft or spirally around it, said cylinder having an opening in the lower end, C, Fig. 4, communicating with all the compartments. In the upper end of the cylinder each compartment has a valve opening outward D, Fig. 3, and covered by an air chamber E, said chamber communicating with the hollow shaft. Each compartment has an air pipe from the center of the cylinder to the outside, said pipe passing part of the way around the cylinder as shown at F, Figs. 2 and 3.

G is the water or liquor vessel into which the cylinder revolves.

H is the gearing for running the cylinder by means of the weight I.

To operate this machine, the cylinder must be partly immersed in water or other liquor, at an angle of 40° or 45° or any other suitable angle, depending on the length and diameter of the cylinder, as shown at J. By revolving the cylinder all the air above the water line K, will be forced out through the hollow shaft A, by the water passing into the cylinder at the opening C. Air is supplied to the cylinder by the pipes F. The pipes after supplying the cylinder with air immerse in the liquor and prevent its escape. I also construct my cylinder with or without a hollow shaft, and extend the air chamber above and around the cylinder, said chamber far enough below the water line to prevent the escape of the air, the air being supplied through the hollow shaft or by pipes passing along it to the outside of the chamber and immersing as before described. I also construct my cylinder to be used without the liquor vessel, by closing the end C, and opening a passage in the compartments at the lower end to allow the liquor to pass from one to the other. I also place valves on the pipes F, opening inward to supply air to the cylinder. To operate this cylinder fill it with liquor above the openings in the lower end, and revolve it at an angle the same as the first.

What I claim as my invention, and desire to secure by Letters Patent is—

1. I claim the cylinder constructed with a hollow shaft, and divided into compartments, either on a line with the shaft or spirally around it. said cylinder being partly immersed in water or other liquor, and revolving at an angle as described.

2. I claim the cylinder with or without a hollow shaft, and extending the air chamber above and around the cylinder, said chamber passing far enough below the water line, to prevent the escape of the air, the air being supplied to the cylinder through the hollow shaft, or by pipes passing along it to the outside of the chamber, said pipes having valves opening inward, or immersing as before described.

3. I claim the cylinder revolving at an angle without being immersed, with the liquor inside said cylinder as described.

4. I claim the application and use of the cylinder, its case and contents, as herein

described, for the purpose of passing air through hydro carbons and their vapors, or mixing air with other gases, for heating or illuminating, or any other purpose requiring a steady blast; I do not limit myself to the form of a cylinder, but claim any other shaped vessel, constructed of metal or other material, and operated as herein described, which will produce the intended effect.

ISAIAH J. HENDRYX.

Witnesses:
S. T. McDOUGALL,
EDGAR A. PURDY.