W. D. DOREMUS.
Air-Compressor.

No. 207,954. Patented Sept. 10, 1878.

Fig. 1.

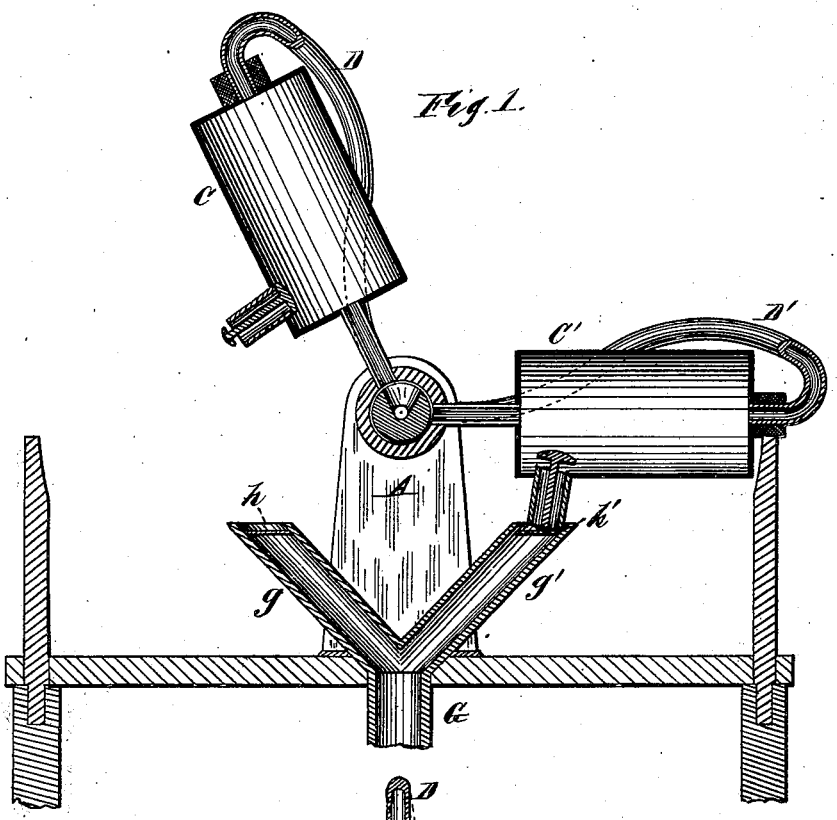



Fig. 2.

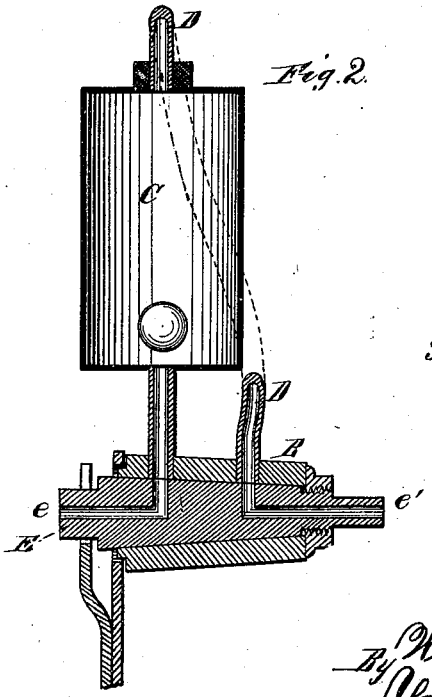



Fig. 3.

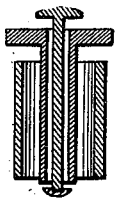
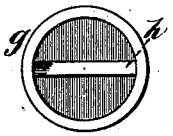


Fig. 4.




Witnesses:
Chas. R. Searle,
Albert Doughty

Inventor:
Willard D. Doremus
By Ygnaga and Wright
Attorneys.

# UNITED STATES PATENT OFFICE.

WILLARD D. DOREMUS, OF WASHINGTON, D. C., ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN W. MANCOURT, OF BROOKLYN, N. Y.

## IMPROVEMENT IN AIR-COMPRESSORS.

Specification forming part of Letters Patent No. **207,954**, dated September 10, 1878; application filed August 21, 1878.

*To all whom it may concern:*

Be it known that I, WILLARD D. DOREMUS, of the city and county of Washington, and District of Columbia, have invented certain new and useful Improvements in Air-Compressors, of which the following is a full, exact, and clear description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a longitudinal section of my improved air-compressor; Fig. 2, a transverse section through one of the receivers; Fig. 3, a view of a modified form of the outlet or waste valve, and Fig. 4 a plan or top view of one of the waste-pipes.

Similar letters of reference in all the figures indicate corresponding parts.

My invention relates to a novel construction of apparatus for compressing air for the purpose of forcing beer and other liquids from barrels, and for other purposes; and it (the invention) consists in certain combinations of parts, all of which will be first fully described, and then pointed out in the claims.

A is one of a pair of uprights, in which is mounted a tube or sleeve, B, which sleeve is connected to the two short sections of pipe, or to the receivers or reservoirs C C′, which may be of any desired shape; or the receivers may be made funnel-shaped, with screw-threads on their lower ends, adapting them to be connected directly with the tube or sleeve B. These receivers have outlet-openings at their outer ends, in which are connected air-pipes D D′, the other end of said pipes being bent down and connected with the tube or sleeve B. The receivers, in their lower ends, are provided with valves to permit the escape of the water. E is a hollow axle, which is provided with the water or supply pipe *e*, and also with the air pipe or passage *e′*. One of these passages communicates with the pipes of the receivers. The other communicates with air-pipes D D′. G is the waste-pipe for the water, and is provided with upright flaring arms *g g′*, and placed in such relation to the receivers that when said receivers are rocked the valves will be brought over (alternately) one or the other of said arms of the said waste-pipes. The upper ends of these discharge-pipes are provided each with a cross-bar, *h h′*, which raise or open the valves, and permit the escape of the water, and also the necessary inlet of fresh air.

The operation of the device is as follows: When one of the receivers is down, as indicated in Fig. 1, water flows into the elevated one and compresses the air, which is conducted away to the point and for the purpose desired. When this elevated receiver becomes nearly filled with water it drops down, turning the sleeve B with it, which opens the ports into and from the other receiver, and also opens the valve, by which the water is allowed to run out. The same operation takes place with respect to the other receiver in a manner easily understood.

The valve shown at Fig 3 is provided with a secondary and smaller valve, which insures the gradual and easy opening of the main valve. This modification may be adopted if found desirable, though in ordinary cases the single valve will be found efficient.

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

1. The combination, in an air-compressor, of two separate and independent receivers, connected by air and water-pipes with a hollow sleeve, and a hollow axle, having suitable inlet-ports, and upon which the sleeve turns, whereby, when water is admitted under pressure, the receivers will alternately receive water and discharge air, substantially as set forth.

2. In an air-compressor, the combination, with the rocking receivers, of the stationary water-pipes, provided with the bar for opening the valves, substantially as shown and described.

3. The combination of receivers C C′, hollow sleeve B, hollow axle E, provided with inlet *e* and outlet *e′*, the valves, and the air-pipes, the whole being arranged to operate substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

W. D. DOREMUS.

Witnesses:
R. P. BARBOUR,
JAMES F. HUGULEY.