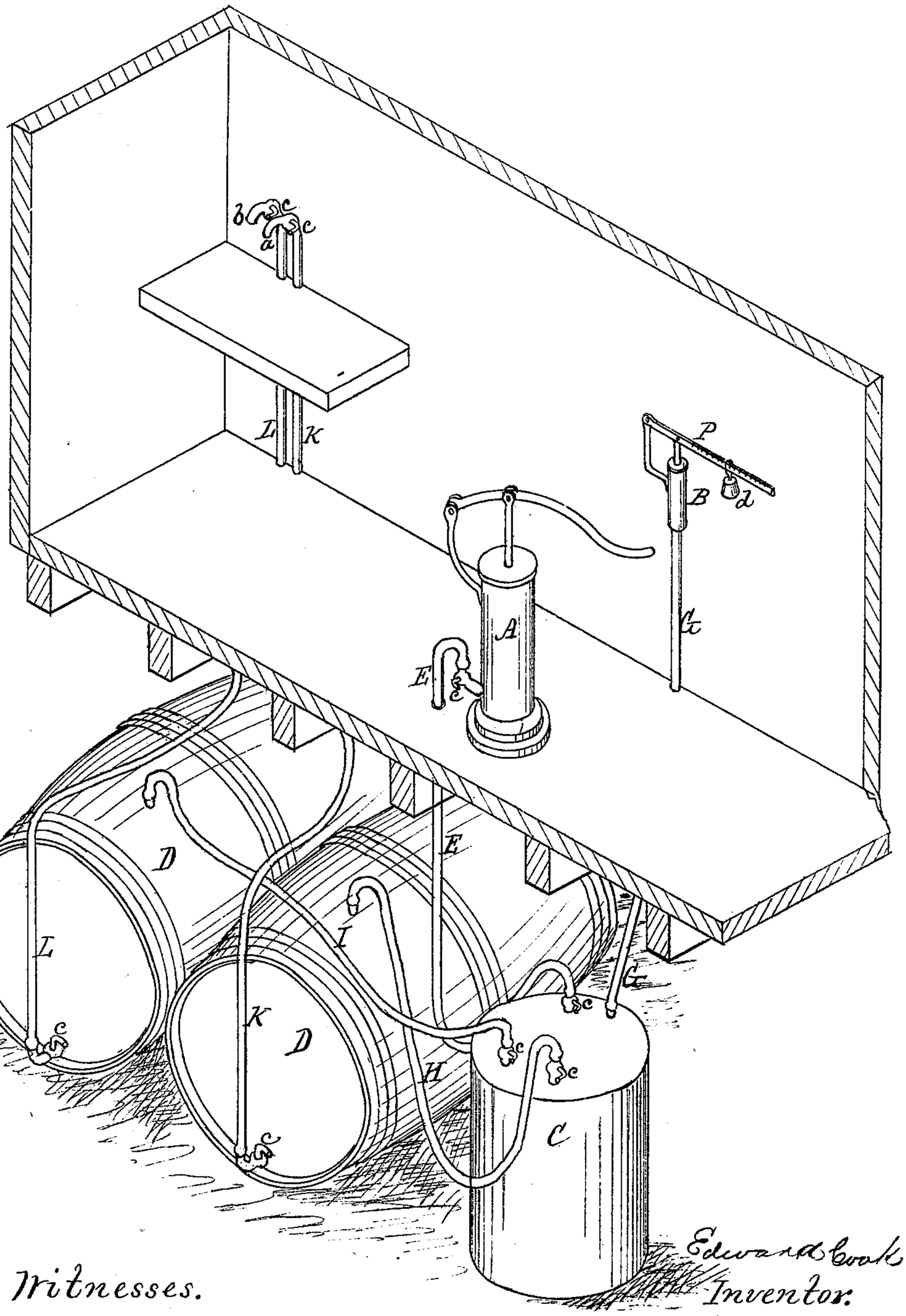
EDWARD COOK.

Improvement in Methods of Raising Liquids from Barrels.

No. 126,267. Patented April 30, 1872.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD COOK, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN METHODS OF RAISING LIQUIDS FROM BARRELS.

Specification forming part of Letters Patent No. 126,267, dated April 30, 1872.

Specification describing a certain Improvement in Apparatus for Raising Oil, Liquors, &c., invented by EDWARD COOK, of the city of Rochester, in the county of Monroe and State of New York.

My invention consists of an air-pump, an air-receiver, and a regulating-valve, having suitable connecting-pipes, combined together and operating in connection with barrels or other holding-vessels, for forcing liquids in stores and other places, as hereinafter described.

In the drawing, the figure represents a perspective view of my improved apparatus.

The air-pump A and regulating-valve B are located in an upper room, while the air-receiver C and barrels or other holding-vessels D D are located in a lower room; but, if desired, they may be located on the same floor. The several pipes, E G H I, are connected, respectively, with the air-receiver and the pump, the regulating-valve, and the tops of the barrels, (of which latter any desired number may be used,) as clearly shown in the drawing. Pipes K L also extend from the escape-nozzles of the barrels upward and connect with the discharge-nozzles *a b*, where the liquid is drawn off. Faucets *c c c* are used at the various points needed, as indicated. The air-pump is of ordinary construction, and simply serves to force air into the receiver. The receiver is simply a closed, air-tight vessel. The safety-valve is a tube attached to pipe G, with a valve or cover pressed down by a jointed lever or steelyard, P, notched in the proper manner, and having the sliding weight *d*, by which the pressure in the air-receiver is graduated to the exact amount desired.

The operation is as follows: Air is pumped into the receiver to produce the necessary pressure, and the connecting-faucet of its pipe is then cut off. The pressure from the receiver is then let onto one or more of the barrels by opening the faucets of their pipe or pipes. This pressure excited upon the liquid in the barrels forces it up and discharges it through the escape-nozzle at the top.

This arrangement is very convenient for raising liquids in stores or other places, since the pressure is always uniform and equal, and the pump is not used except in primarily charging the receiver. A special feature is that different liquids—for instance, oil and liquors—can be forced from different barrels by the same receiver without becoming tainted by the connection, since the pressure is always forward from the receiver, and no back-action can occur; or, if desired, the faucets of all but one kind can be turned off. This cannot be accomplished by the ordinary forcing arrangement, which requires a separate pump to each kind of liquid. Another important advantage lies in the use of the regulating-valve, which, by the use of the steelyard and weight, can be gauged to a given pressure, so as to blow off when more than a given pressure is produced. By this means the operator can gauge the flow through the nozzles *a b* to a gentle flow, and without producing the surging and extreme force which is unavoidable in the use of the ordinary air-pump. This is of great importance in rendering the invention practical and useful. This valve also prevents bursting of the receiver by overcharge.

It will be noticed that this valve is brought up into the upper room by the pipe, so as to be convenient to the operator.

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

The combination of the air-pump A, weighted regulating-valve B, and air-receiver C with connecting-pipes E G H I, when employed, in connection with a barrel or barrels or other holding-vessels, for forcing liquids, as herein described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDWARD COOK.

Witnesses:
H. E. BROWN,
ARCHIE BAINE.