

J. Roy.

Draining Apprs.

N^o 89,946.

Patented May 11, 1869.

Fig. 1.

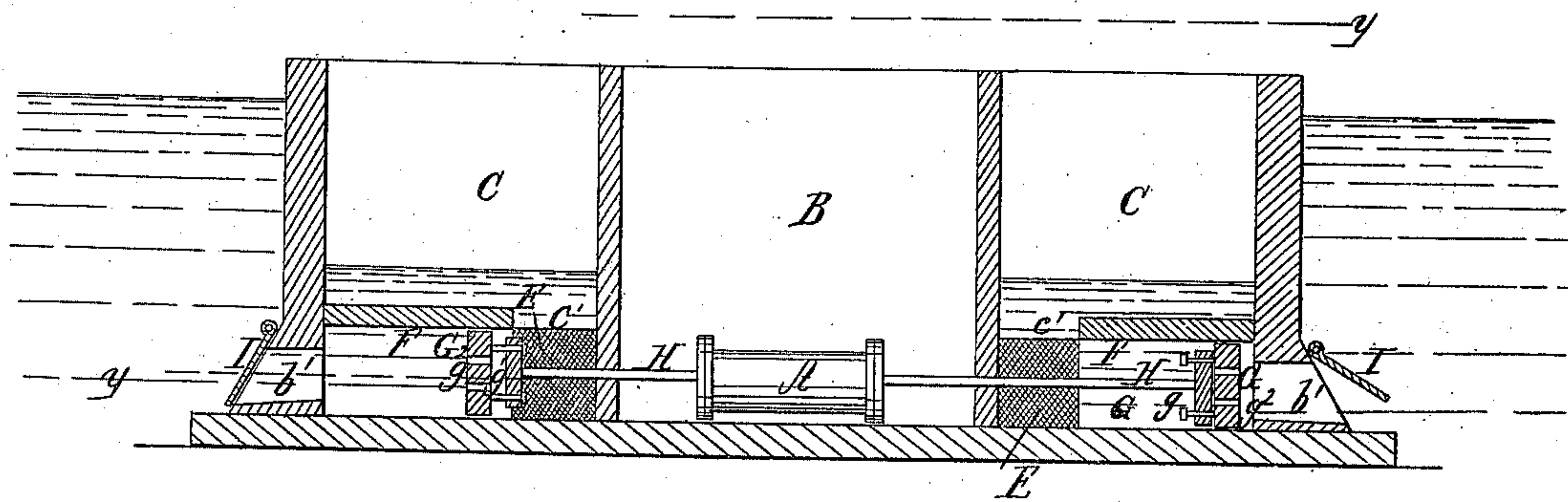
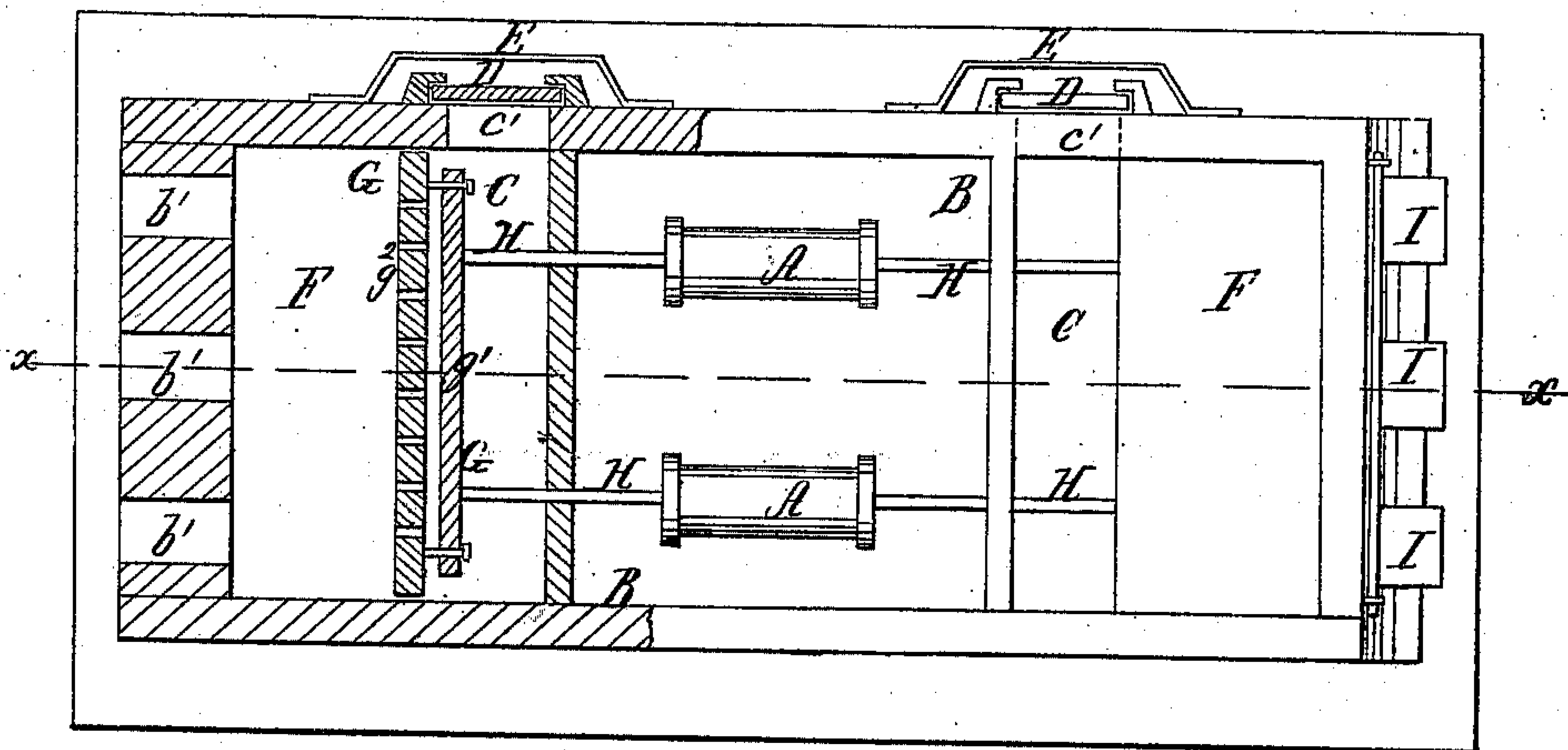


Fig. 2.



Inventor;
John Roy

Wm. H. Morgan

Attorneys.

Witnesses;
Chas Nida
Wm. A. Morgan

United States Patent Office.

JOHN ROY, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 89,946, dated May 11, 1869.

IMPROVEMENT IN DRAINING-APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN ROY, of New Orleans, in the parish of Orleans, and State of Louisiana, have invented a new and improved Draining-Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved draining-apparatus, taken through the line $x x$, fig. 2.

Figure 2 is a top view of the same, partly in section, through the line $y y$, fig. 1.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an improved apparatus for draining low, overflowed, or swamp lands, which shall be effective and reliable in operation, and so constructed that it may be placed under the water of the canal, and may force the water out through the levee or dike while working only against the head of water outside.

And it consists in the construction and combination of the various parts of the apparatus, as hereinafter more fully described.

A are the steam-cylinders by which the pumps are worked, one or more of which may be used, and which may be placed in a water-tight compartment, B, of the apparatus, so as to be at the same level as the pumps to be worked, as shown in fig. 1; or the said cylinder or cylinders may be placed at a higher level, and connected with the piston-rods of said pumps by suitable connecting-rods and levers.

C C are compartments communicating with the canal into which the water flows from the land to be drained, by means of openings c' , formed in the walls of said compartments.

The openings c' are provided with sliding or other gates D, by means of which the entrance of the water into the compartments C may be prevented when desired.

The openings c' should also be provided with screens or gratings E, to prevent the entrance, into the compartments C, of substances that would choke the pumps or interfere with their proper working.

F are the piston-chambers of the pumps, which are made long, broad, and shallow, as shown in figs. 1 and 2, so that they may be worked, when required, under a low inside head of water.

G is the piston, which is made in two parts, g^1 and g^2 . The part g^1 is solid, and is rigidly and securely attached to the end of the piston-rod H.

The other part, g^2 , is perforated, or has its middle part cut away, and is connected with the part g^1 by four or more bolts, which are attached to the part g^2 , and pass through holes in the part g^1 , so that the said part, g^2 , may have a play of about six inches.

By this construction, when the pistons G are pushed forward, they are perfectly tight, and push the water out through the discharge-openings f of the piston, or pump-chambers F, and when the pistons are drawn back, the part g^2 falls behind the part g^1 , and allows the water to flow freely into the chambers F.

The openings f are closed at their outer ends by gates I, which are held closed by the inward pressure of the outside head of water, and are opened by the outward pressure of the water as it is forced out by the pistons G.

By this construction of the apparatus, it may be placed at any desired depth below the water in the canal, into which flows the water from the land to be drained, while at the same time the water is forced out against the outside head of water, wholly uninfluenced by the inside head of water.

It should also be observed that the throttle-valve may be so connected with the pumps, that the steam will only be admitted to the cylinder when the pump is full, so that the pumps will work faster or slower, according to the amount of water to be removed or thrown out.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The draining-apparatus, so constructed that it may be placed at any desired depth beneath the water of the canal while forcing out the water against the outside head of water only, substantially as herein shown and described, and for the purpose set forth.

2. The arrangement of the water-tight compartment B, the compartments C, one or more, the piston-chambers F, and pistons G, with each other, substantially as herein shown and described, and for the purposes set forth.

JOHN ROY.

Witnesses:

HENRY LINDOP,
JOHN DAVIDSON.