

(No Model.)

T. BARBER.

FORCE PUMP.

No. 321,335.

Patented June 30, 1885.

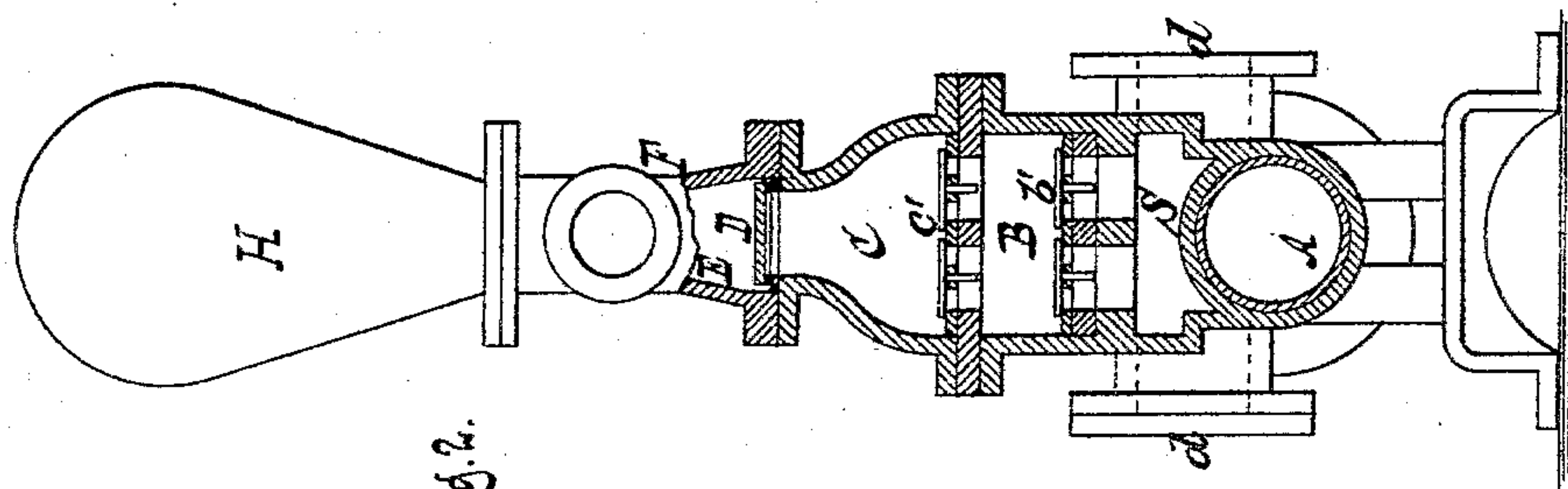


Fig. 2.

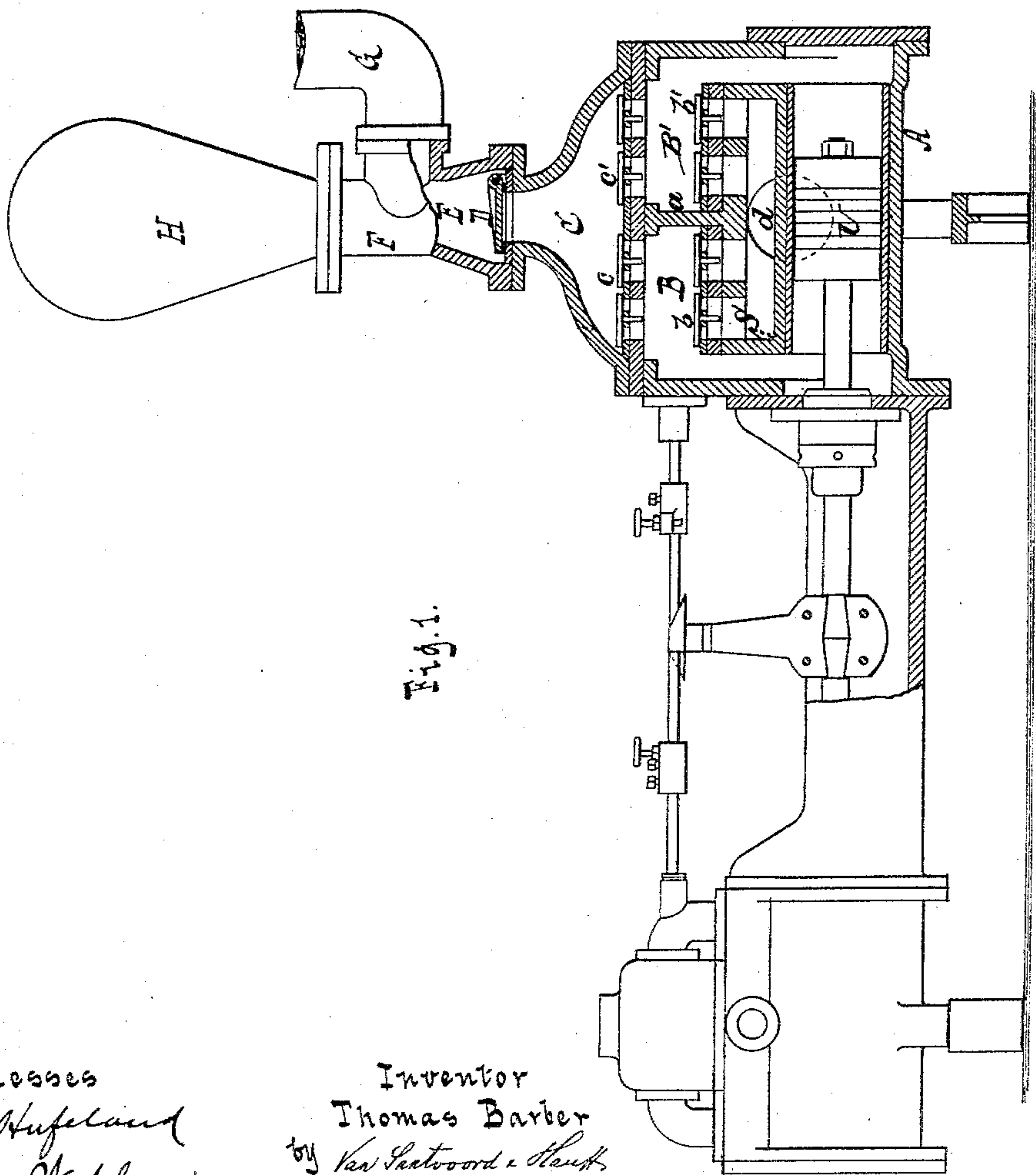


Fig. 1.

Witnesses
Otto Hufeland
Char. Wahlers.

Inventor
Thomas Barber
by Van Schoor & Hark
his att'ys

UNITED STATES PATENT OFFICE.

THOMAS BARBER, OF FLATBUSH, NEW YORK.

FORCE-PUMP.

SPECIFICATION forming part of Letters Patent No. 321,335, dated June 30, 1885.

Application filed June 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BARBER, a citizen of the United States, residing at Flatbush, in the county of Kings and State of New York, have invented new and useful Improvements in Force-Pumps, of which the following is a specification.

This invention relates to improvements in force-pumps; and it consists in the construction and combination of devices hereinafter described and claimed, reference being made to the accompanying drawings, illustrating my invention, in which—

Figure 1 represents a longitudinal section of a pump-cylinder provided with my check-valve and T-delivery. Fig. 2 is a transverse section of the same.

In said drawings, the letter A designates the cylinder of a force-pump. B B' are two force-chambers, divided by a partition, *a*. S is the suction-chamber, and C the collection-chamber. Between the suction-chamber S and the force-chambers B B' are situated two series of suction-valves, *b b'*, and between the force-chambers B B' and the collection-chamber C are situated two series of delivery-valves, *c c'*. The top of the collection-chamber C forms the seat for the check-valve D, which opens directly into the delivery-chamber E. This delivery-chamber is formed in a T-coupling, F, which is firmly secured on the top of the collection-chamber, and which connects by one of its branches with the delivery-pipe G, while its other branch supports the air-chamber H.

The operation of my pump is as follows: The liquid enters into the suction-chamber S

through the pipe *d*, and, as the suction caused by the forward motion of the piston U opens the series of suction-valves *b*, the liquid is permitted to enter force-chamber B until the piston has reached the end of its stroke in that direction. As it goes back, while it fills force-chamber B' through suction-valves *b'*, it at the same time forces the liquid which is in force-chamber B through delivery-valves *c* into the collection-chamber C, from whence it passes into the delivery-chamber through the check-valve D.

The purpose of check-valve D is to prevent the column of liquid which is above the collection-chamber C from pressing on the delivery-valves *c c'* which are in that chamber.

What I claim is—

The combination, with the pump-cylinder A, the suction-chamber S, the valves *b b'*, and the two force-chambers B B' of a single collection-chamber, C, the valve *c c'*, leading to the collection-chamber, the T-coupling F, forming the delivery-chamber E, the air-chamber H, secured to one branch of the T-coupling, the delivery-pipe G, secured to another branch of said T-coupling, and the check-valve D, situated between said collection and delivery chamber, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

THOMAS BARBER. [L. S.]

Witnesses:

W. HAUFF,
CHAS. WAHLERS.