

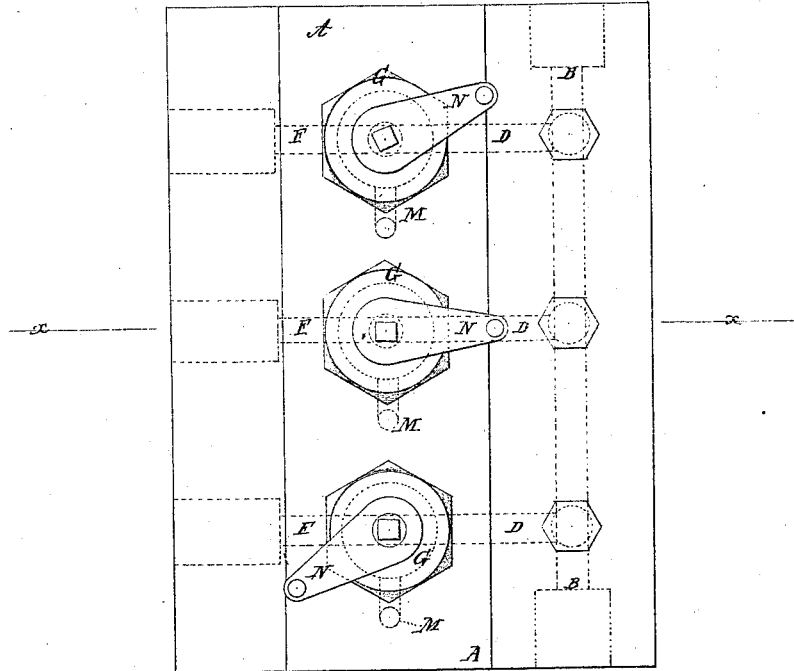
*C. S. Bailey,*

*Stop Cock.*

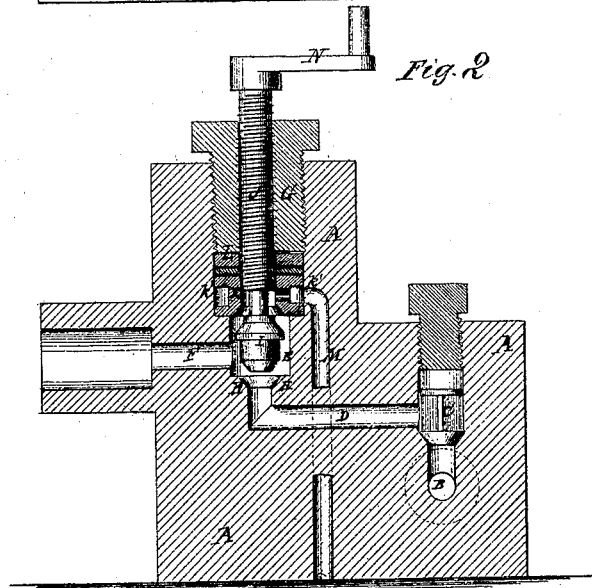
*No. 109,371.*

*Patented Nov. 22. 1870.*

*Fig. 1*



*Fig. 2*



**Witnesses:**

*A. W. Almquist*  
*S. S. Mabey*

**Inventor:**

*Chas. S. Bailey*

**PER**

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# United States Patent Office.

CHARLES S. BAILEY, OF MOBILE, ALABAMA.

Letters Patent No. 109,371, dated November 22, 1870; antedated November 19, 1870.

## IMPROVEMENT IN HYDRAULIC STOP-VALVES.

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, CHARLES S. BAILEY, of Mobile, in the county of Mobile and State of Alabama, have invented a new and useful Improvement in Hydraulic Stop-Valves; 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 drawing forming part of this specification, in which—

Figure 1 is a top view of a valve-chest to which my improvement has been attached.

Figure 2 is a detail sectional view of the same, taken through the line *x x*, fig. 1.

My invention has for its object to furnish an improvement in the construction of hydraulic stop-valves, especially of hydraulic presses, which will prevent the water, oil, or other liquid being used from flowing back from one press-cylinder or pipe when the pressure is being applied to another operated by the same pump or pumps; and

It consists in the construction and combination of various parts of the device, as hereinafter more fully described.

A is the valve-chest, through which from end to end runs the main channel B, with both ends of which pumps are connected.

C are the vertical check-valves, which are placed above the channel B in the passage connecting the channel A with the channel D.

The valves C are ground into their seats by means of a screw-driver placed in a slot in their upper ends, and should have a hole drilled and tapped in its upper ends for a rod to be screwed into for drawing out the said valves when desired.

The valves C are made in the ordinary manner; that is to say, round at the top and bottom, and triangular in their middle parts.

The check-valves passages are closed at their upper ends by screw-plugs, in the ordinary manner.

The channels D, leading from the check-valves C, lead up into the open chambers E, from which channels F lead out from the valve-chest A, and are connected at their outer ends with the pipes or other appliances running to the ram-cylinders or other places where the pressure is required.

G are brass bushings, having screw-threads cut upon their outer and inner surfaces, and which are screwed into the valve-chest A above the open chambers E.

The lower end of the chambers E have valve-seats H formed in them to receive the beveled or cone-shaped lower ends of the stop-valves I, the stems J

of which have screw-threads cut upon them, and are screwed up through the bushings G.

K are cylindrical washers, placed in the lower parts of the hole in which the bushings G are placed.

The washers K, through which the valve-stems J pass, should have a leather washer placed below and above them, and metal rings or washers L should be placed above the upper leather washer for the bushing G to act against when pressing the washers down to their places.

In the lower ends of the washers K are formed seats for the upper bevel or cone-shaped ends of the valves I.

The part of the valve-stems J that enter the lower part of the washers K, are grooved or turned down, as shown in fig. 2, to form a space between the said stems and the inner surface of the said washers.

The outer surface of the washers K has a ring groove or channel, K', formed around its middle part, which channel communicates with the space at the interior of said washers, by a hole through the body of the said washers, as shown in fig. 2.

From the channels K' of the washers K, a channel, M, leads through the body of the valve-chest A directly to the cistern.

To the upper ends of the valve-stems J are attached cranks or handles N, for convenience in operating the valves I.

By this construction, when the valves I are raised and the pumps are worked, the water, oil, or other liquid used will pass the check-valves C, and pass through the channel D, open chamber E and channel F to the place where the pressure is applied, the check-valves C effectually preventing its return.

When the valves I are lowered to their seats H, the liquid will flow out through the washers K, channel K', and channel M, and thus back to the cistern.

By this construction the stop-valves I each act independently of the others, so that the liquid may be flowing out of some of the presses while the others are having pressure applied to them, or may be simply holding their pressure.

Having thus described my invention,

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

The improved valve-chest A, having main channel B, a series of channels, D E M, double valves I, nuts *k k*, screws J, and plugs G, all constructed and relatively arranged as and for the purpose described.

CHAS. S. BAILEY.

Witnesses:

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