

No. 632,093.

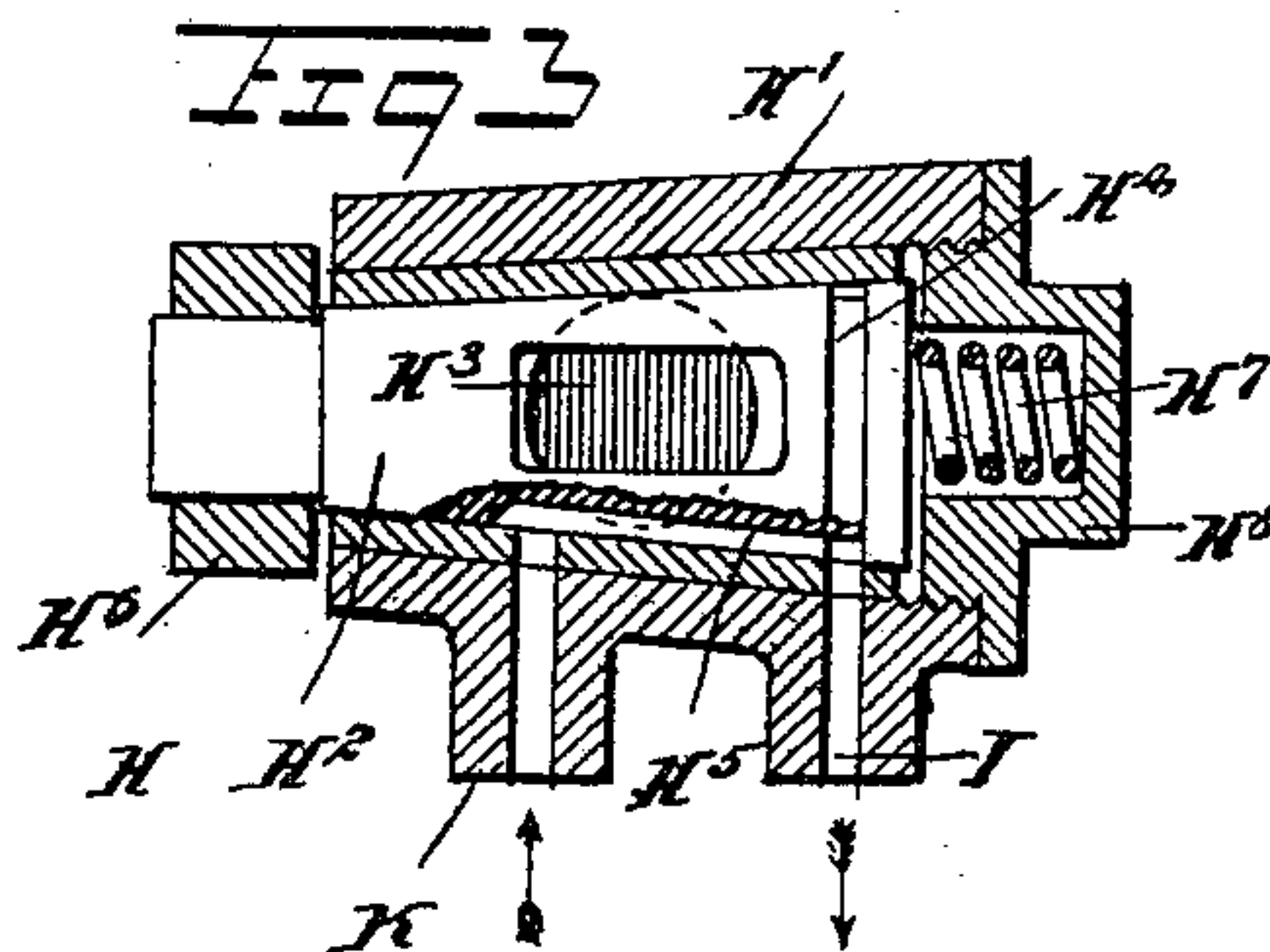
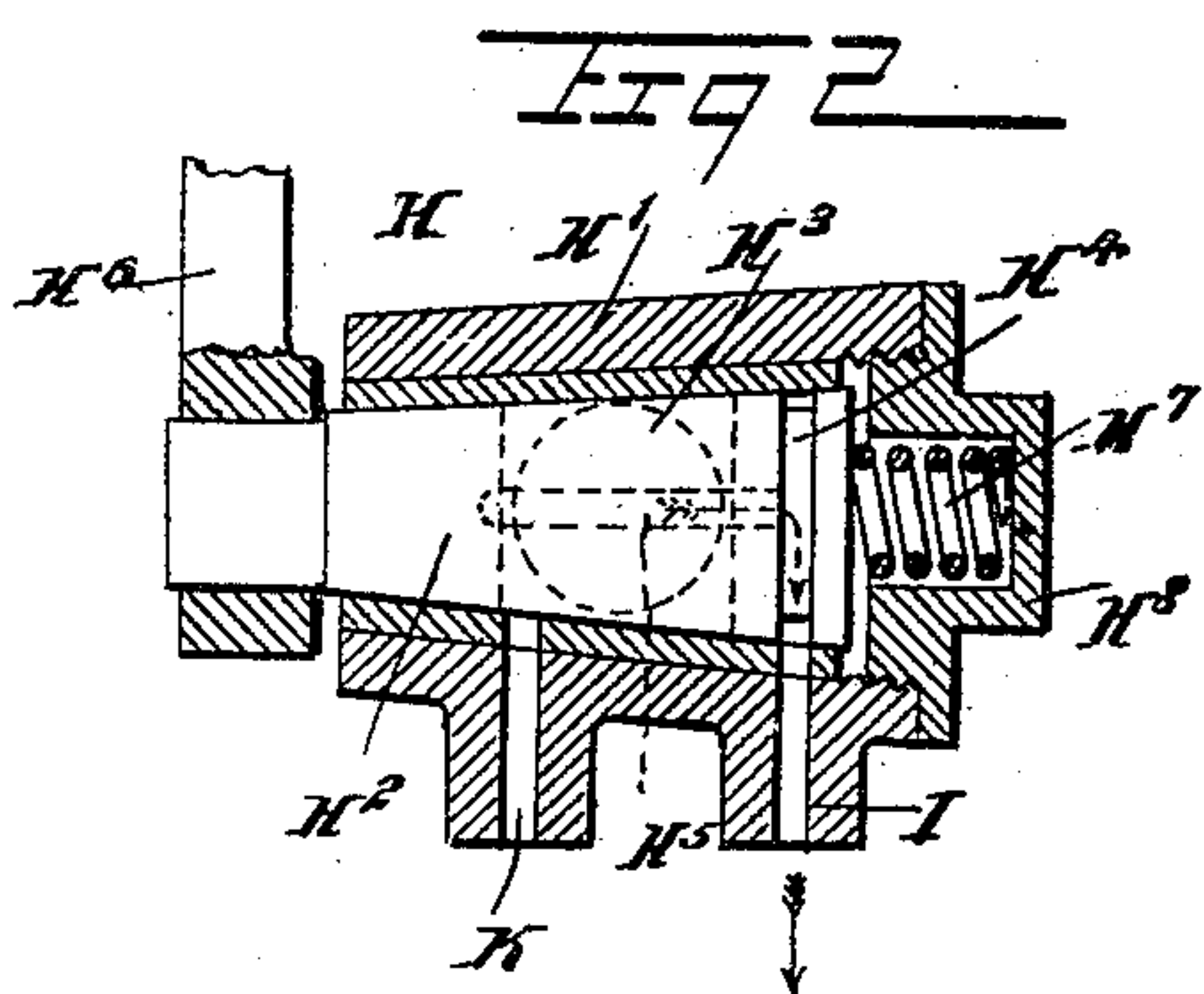
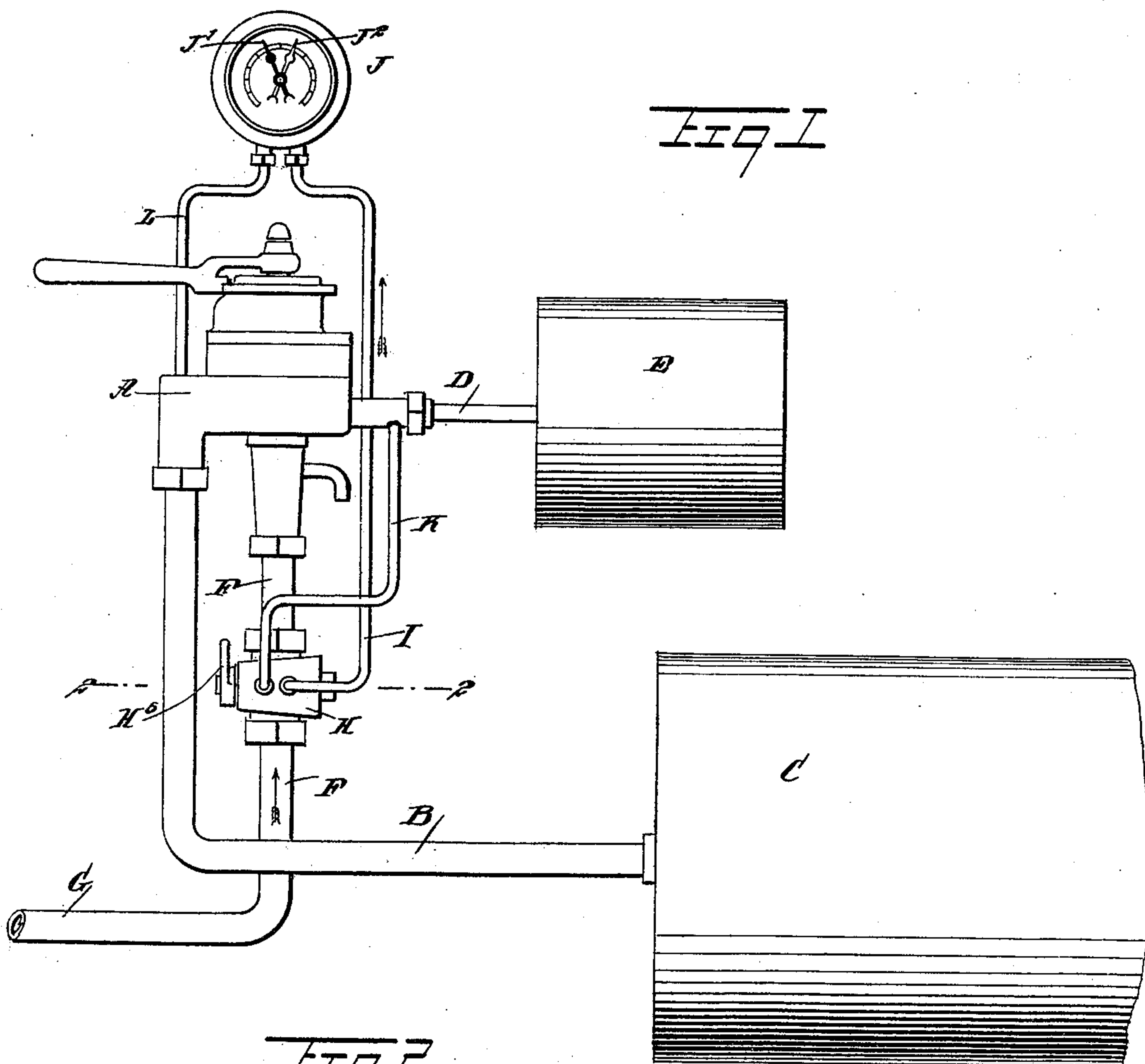
Patented Aug. 29, 1899.

D. BROWN.

CUT-OUT COCK FOR ENGINEERS' VALVES.

(Application filed July 1, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

DENNIS BROWN, OF SOMERSET, KENTUCKY.

CUT-OUT COCK FOR ENGINEERS' VALVES.

SPECIFICATION forming part of Letters Patent No. 632,093, dated August 29, 1899.

Application filed July 1, 1899. Serial No. 722,550. (No model.)

To all whom it may concern:

Be it known that I, DENNIS BROWN, of Somerset, in the county of Pulaski and State of Kentucky, have invented a new and Improved
5 Cut-Out Cock for Engines Double-Heading, of which the following is a full, clear, and exact description.

The invention relates to fluid-pressure brakes; and its object is to provide a new and
10 improved cut-out or stop cock more especially designed for use when a plurality of locomotives are coupled to a single train, the arrangement then permitting of establishing connection between the train-line pressure and the
15 train-pipe gage, so that each engineer can see what pressure there is in the train-pipe and what is drawn off by the engineer of the leading engine for braking or other purposes, and in case of failure of the leading engine to
20 charge or control the brakes the engineers of the other locomotive or locomotives can instantly charge and handle the brakes.

The invention consists of certain parts and details and combinations of the same, as will
25 be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which
30 similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is an enlarged sectional plan view of the improvement in a cut-out position, the section being on the line 2 2
35 in Fig. 1; and Fig. 3 is a like view of the same with the plug in a cut-in position.

The engineer's valve A, of any approved construction, is connected by a pipe B with the
40 main air-reservoir C and by a pipe D with the brake-valve reservoir E and by a connection F with the train-pipe G, said connection F containing the cut-out or stop plug H, connected by a pipe I with a double gage J for
45 indicating the train-line pressure by the black hand or pointer J' at the time the cut-out plug is in a cut-out position. A pipe K connects the pipe D with the cut-out plug H, so that
50 when the latter is in a cut-in position then the train-line pressure or that of the engineer's valve is likewise indicated by way of the plug H, pipe I, and hand J' on the gage J.

The latter is also connected by a pipe L with the engineer's valve A to indicate main-reservoir pressure by the red hand J². 55

The cut-out cock H is provided with a body H' and a plug H², formed with the usual central aperture H³ for establishing communication between the train-pipe G and the engineer's valve, and said plug is also provided
60 near its base end with an annular peripheral groove H⁴, from which leads longitudinally a groove H⁵, as is plainly indicated in Figs. 2 and 3. The plug H² is provided with the usual handle H⁶ and is pressed to its seat by
65 a spring H⁷ in a cap H⁸. When the plug H² is in the cut-out position, as shown in Fig. 2, then communication between the engineer's valve A and the train-pipe G by way of the connection F is cut off, but connection between
70 the train-pipe and the train-pipe-pressure gage J is established by way of the groove H⁵ now opening into the train-pipe-pressure side of the cut-out plug, so that air from the train-pipe can pass through the groove H⁵ into the
75 groove H⁴, in communication at all times with the pipe I, leading to the train-pipe-pressure gage J. Thus when the cut-out plug H is in a cut-out position at the time the locomotive
80 is second or third in the train still the train-pipe pressure is indicated on this locomotive, so that the engineer in charge of this second or third locomotive can see that the fluid-pressure system of the train is in proper
85 order and properly manipulated by the engineer in charge of the first or leading engine. Now in case anything happens to the first or leading engine and the fluid-pressure system of the train should become out of order—that
90 is, in case the train-pipe pressure is reduced or increased beyond that required for properly running the train—then the engineer of the second or third locomotive can charge the train-pipe and manipulate the fluid-pressure
95 brakes by manipulating the engineer's valve A in the usual manner after cutting in the plug H for the purpose. When the plug H is in a cut-in position, as shown in Fig. 3, then the engineer's valve by the connection
100 D and pipe K is connected with the groove H⁵, which opens into the groove H⁴, at all times in register with the pipe I, so that the pressure from the engineer's valve A and said connection D can pass by the pipe K, the

grooves $H^5 H^4$, and the pipe I to the train-pipe-pressure gage J to indicate the train-pipe pressure at the time the plug is cut in. Thus instead of connecting the engineer's valve A directly with the train-pipe-pressure gage J, as heretofore practiced, such connection is made by way of the pipe K, the cut-out plug H, and the pipe I, as above explained.

It is understood that by the construction described the grooves H^4 and H^5 form an air-passage for conducting the air from the train-pipe to the pipe I and the gage J at the time the cut-out plug is in a cut-out position, and the said air-passage connects the pipe K with the pipe I and gage J at the time the cut-out plug is in a cut-in position.

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

1. A cut-out cock in the connection between the train-pipe and the engineer's valve, and arranged to establish connection between the train-pipe and the train-pipe-pressure gage at the time the cut-out cock is in a cut-out position, substantially as shown and described.

2. A cut-out cock in the connection between the train-pipe and the engineer's valve, and arranged to establish communication between

the engineer's valve and the train-pipe-pressure gage at the time the cut-out cock is in a cut-in position, substantially as shown and described.

3. A cut-out cock in the connection between the train-pipe and the engineer's valve, and having a plug with a central aperture, and an air-passage for connection with the train-pipe-pressure side of the plug when the latter is in cut-out position, and a pipe connection between the train-pipe-pressure gage and the said air-passage, substantially as shown and described.

4. A cut-out cock in the connection between the train-pipe and the engineer's valve, and having a valve-plug with a central aperture and an air-passage separate therefrom, a pipe connection between the train-pipe-pressure gage and one end of said passage, and a pipe between the engineer's valve and the other end of the said air-passage when said cut-out cock is in a cut-in position, substantially as shown and described.

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Witnesses:

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