

(No Model)

N. CLINE & D. COUGHANOUR.
ENGINEER'S BRAKE VALVE.

No. 583,733.

Patented June 1, 1897.

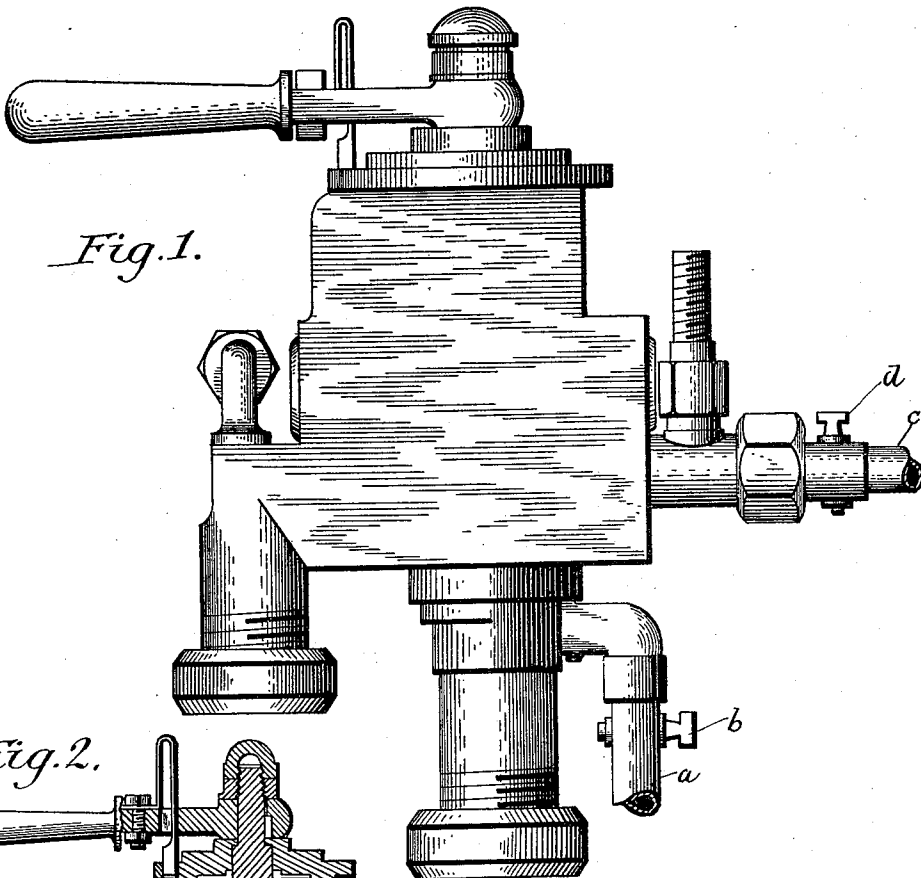
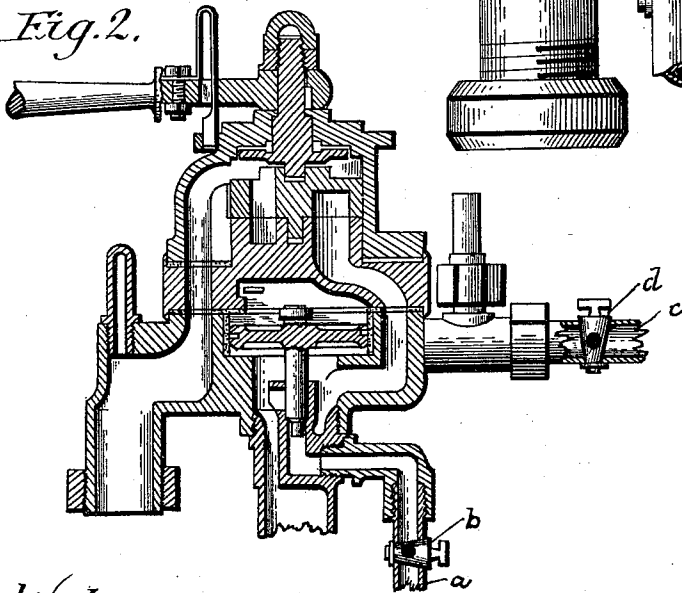


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

NELSON CLINE AND DANIEL COUGHANOUR, OF FREEDOM, PENNSYLVANIA.

ENGINEER'S BRAKE-VALVE.

SPECIFICATION forming part of Letters Patent No. 583,733, dated June 1, 1897.

Application filed May 6, 1896. Serial No. 590,478. (No model.)

To all whom it may concern:

Be it known that we, NELSON CLINE and DANIEL COUGHANOUR, citizens of the United States of America, residing at Freedom, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Engineers' Brake-Valves, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to improvements in the ordinary engineer's valve for automatically-operated brake systems, and has for its object to provide attachments for such engineer's valve which will enable it to be used to apply the brakes for service application in case the small reservoir is accidentally detached, to avoid the jerky action which would result from the use of the emergency stop.

With the above and other objects in view the invention consists in the novel construction and combination to be hereinafter more fully set forth and specifically claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, wherein like characters of reference denote corresponding parts in both views, in which—

Figure 1 is a view in elevation, looking at the front, of a valve equipped with our improvement; and Fig. 2 is a vertical sectional view of the same.

To construct our improved valve, we use the ordinary engineer's valve and provide in the exhaust-pipe *a* a stop-cock *b*, and the pipe *c*, connecting the small reservoir with the chamber above the piston which operates the service release-valve, is provided with a stop-cock *d*.

In order to illustrate our improvement, we have shown the full mechanism of the ordinary engineer's valve for brake systems with our improvement applied thereto. Should the pipe *c* to the small reservoir be broken, as is often the case, the valves *d* would be closed and the valve operated as usual for the emergency stop, but for the service application the valve *b* is first closed, then the brake-handle moved to the service stop and the valve *b* opened slowly until the brakes are applied.

To release the brake, close the valve *b* and move the brake-handle to its releasing position.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In combination with an engineer's valve for automatic brakes having the usual pipes leading to the small reservoir and service-exhaust, a stop-cock seated in the exhaust-pipe and means for controlling the connection with the small reservoir, substantially as described.

2. In combination with an engineer's valve for automatic brakes having the usual exhaust and small-reservoir pipes, a stop-cock in the pipe leading to the small reservoir, and a stop-cock in the exhaust-pipe, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

NELSON CLINE.
DANIEL COUGHANOUR.

Witnesses:

ALFRED M. WILSON,
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