

D. B. DENNISON.

Cylinder-Cocks for Locomotive-Engines.

No. 150,540.

Patented May 5, 1874.

Fig. 1.

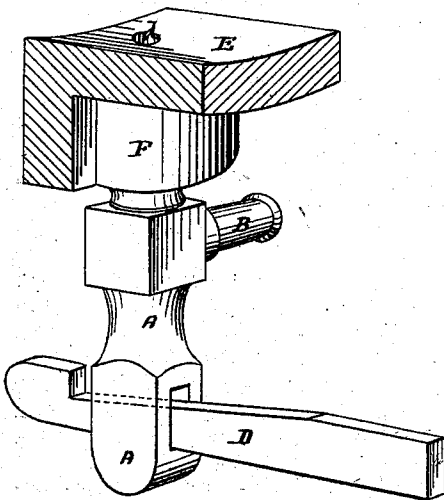
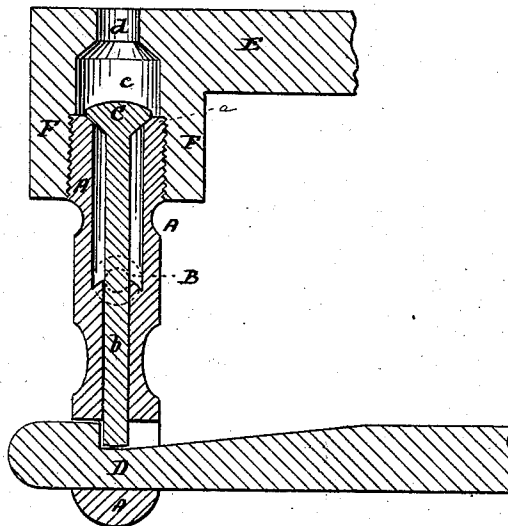


Fig. 2.



Witnesses

Emil Dick.
J. R. Nottingham

Inventor

David B. Dennison
by atty Hollok

UNITED STATES PATENT OFFICE.

DAVID B. DENNISON, OF OTTUMWA, IOWA, ASSIGNOR OF ONE-HALF HIS RIGHT TO J. T. HACKWORTH, J. G. HUTCHISON, W. T. MAJOR, AND ALLEN JOHNSTON, OF SAME PLACE.

IMPROVEMENT IN CYLINDER-COCKS FOR LOCOMOTIVE-ENGINES.

Specification forming part of Letters Patent No. **150,540**, dated May 5, 1874; application filed April 11, 1874.

To all whom it may concern:

Be it known that I, DAVID B. DENNISON, of Ottumwa, Wapello county, Iowa, have invented certain new and useful Improvements in Cylinder-Cocks for Locomotive-Engines, of which the following is a specification:

This invention is an improvement on that for which Letters Patent were granted to me February 25, 1873. My improved cylinder-cock, in its general organization, as well as in its mode of operation, resembles that described in my aforesaid Letters Patent. The main difference, which constitutes the improvement herein embraced, is, that I now form the valve-chamber, in which the valve works, in the body of the cylinder itself, instead of making it in the barrel or shell of the cock, as in my patented invention. By so doing I make the cock easier to manufacture, cheaper, and more durable.

The accompanying drawing represents the manner in which my invention is carried into effect.

Figure 1 is a perspective view of my improved cylinder-cock, and of so much of one end of the steam-cylinder as requisite to illustrate my improvement. Fig. 2 is a vertical longitudinal section of the parts shown in Fig. 1.

A is the shell or barrel of the cock. B is the scape-hole or outlet. C is the valve, resting upon seat *a*, and opening upward. *b* is the valve-stem, and D is the wedge or beveled bar for lifting the valve. The general arrangement and operation of these parts are quite the same as described in my aforesaid patent, No. 136,221. In my patented cylinder-cock the valve-chamber and tube communicating with the cylinder form part of the cock itself. This construction is open to objection, because thereby the shell of the cock must be made in several parts, requiring to be fitted together, and because the cost of manufacture is en-

hanced, and its durability is, to a certain extent, impaired. I now dispense entirely with such chamber and tube in the barrel or shell A, and cause the latter to terminate, as seen, at the valve-seat *a*. To provide for the chamber and communication with the cylinder, I now cast, on the part of the rim of the cylinder E where the cock is to be placed, a lug or projection, F, of a size sufficient to give a sufficient body of metal to allow the hole into which the cock is screwed to be made deep enough to form a chamber in which the valve-head can work, as shown at *c*. There is a smaller hole, *d*, leading from chamber *c* into the cylinder; and this hole must, of course, be smaller than the valve-head, so as to prevent liability of the latter being carried into the cylinder when the engine is reversed. My improvement requires that the cylinder should be cast with the lug or projection F, which is afterward reamed out to form the chamber *c* and aperture *d*, leading therefrom into the cylinder. This, however, involves but little trouble and expense. I am, in this way, enabled to dispense entirely with one part of my patented cylinder-cock; and the device is consequently cheaper, stronger, and more durable, and less liable to be broken off. It can also be more easily manufactured, and will have a neater appearance.

What I claim, and desire to secure by Letters Patent, is—

The herein-described cylinder-cock, having its shell or barrel terminating at or near the valve-seat, in combination with the steam-cylinder, formed at the point to which the cock is applied with a chamber to receive and contain the valve-head of said cock, as shown and set forth.

DAVID B. DENNISON.

Witnesses:

A. G. HARRON,
HENRY THRONE.