

J. ALLIN.
Testing-Plugs.

No. 144,881.

Patented Nov. 25, 1873.

fig. 1.

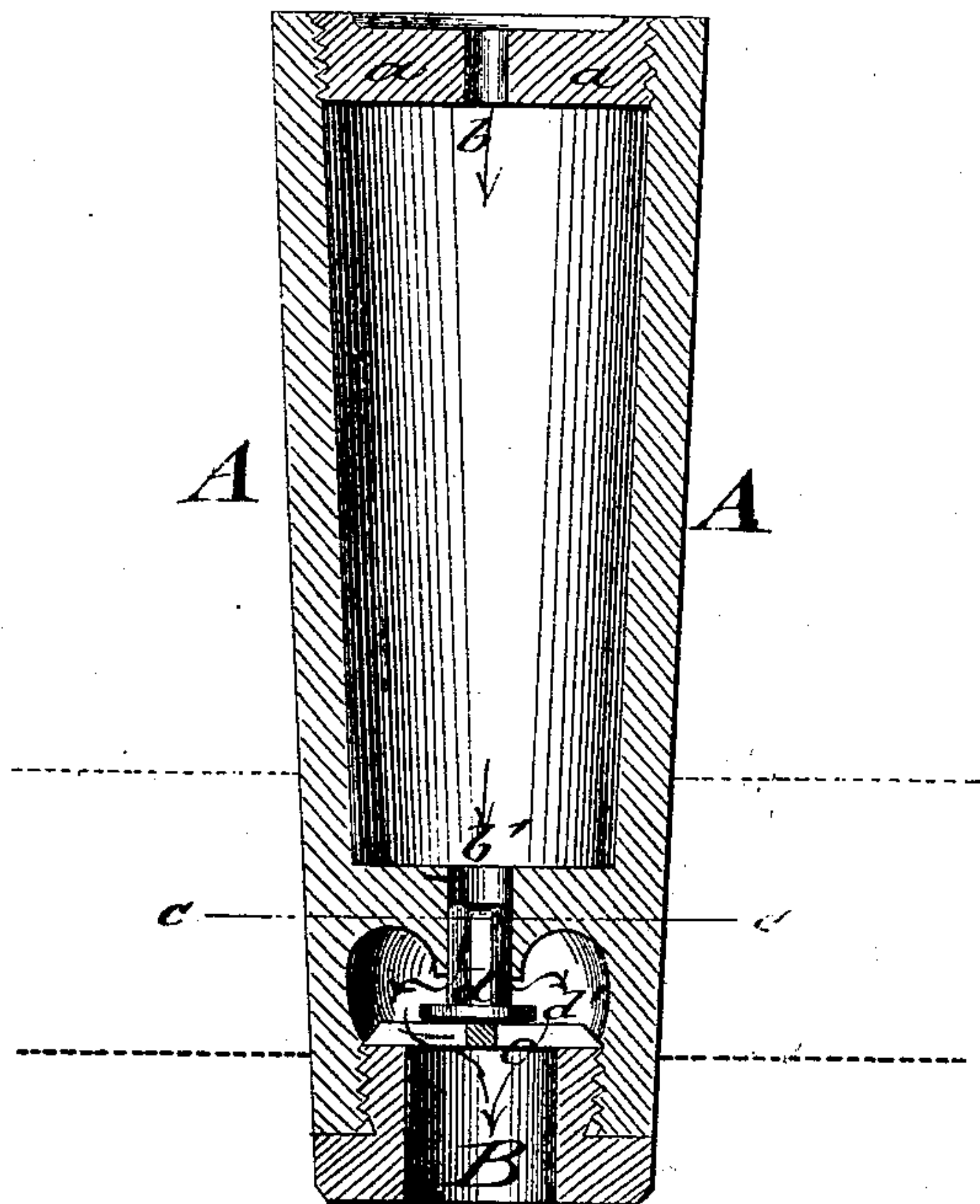


fig. 2.

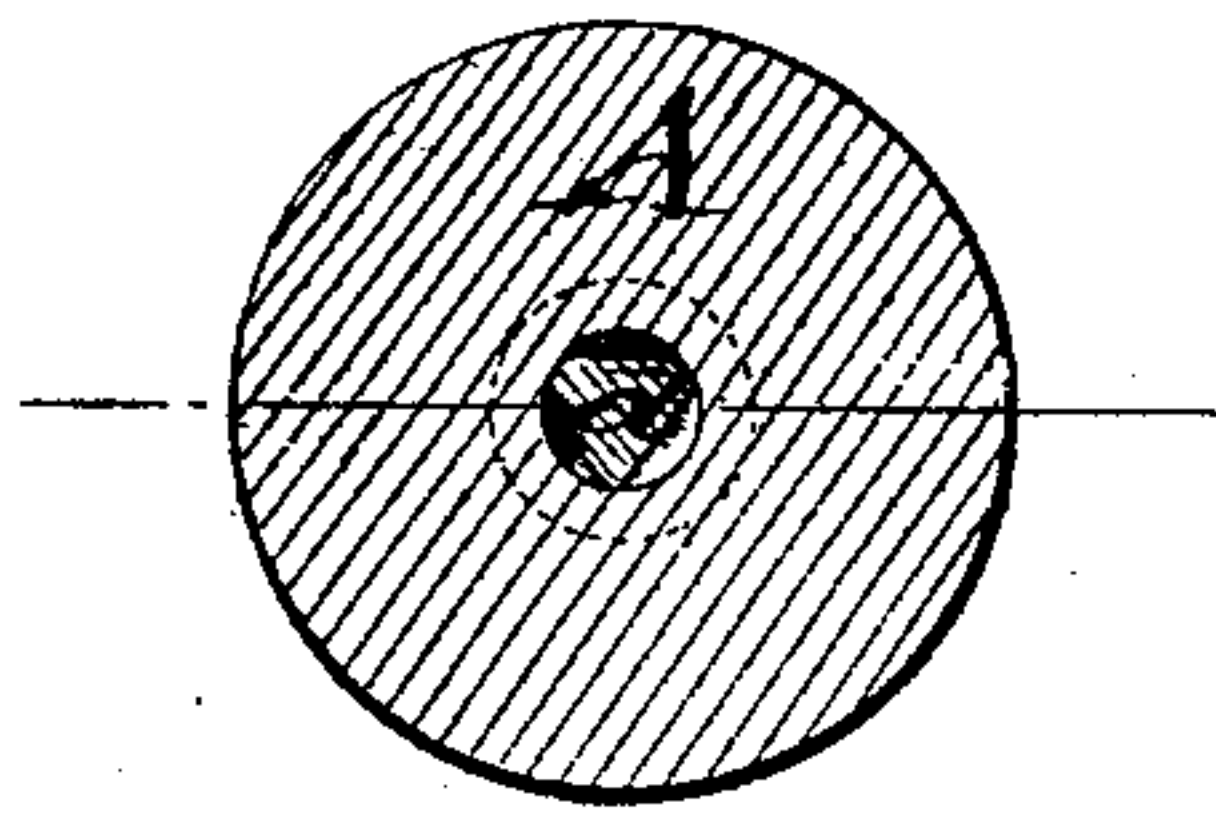
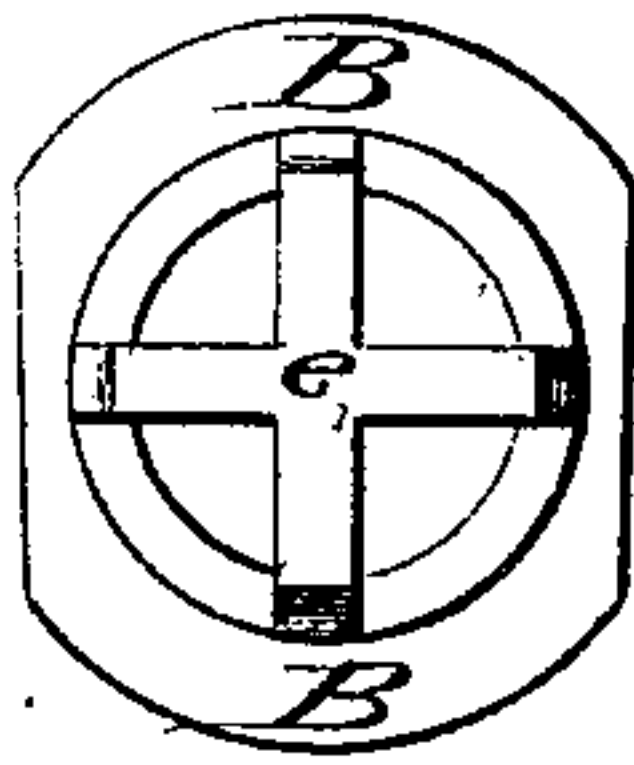


fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN ALLIN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TESTING-PLUGS.

Specification forming part of Letters Patent No. **144,881**, dated November 25, 1873; application filed November 1, 1873.

To all whom it may concern:

Be it known that I, JOHN ALLIN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Testing-Plug, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved testing-plug; Fig. 2, a horizontal section of the same on the line *c c*, Fig. 1; and Fig. 3, a top view of the valve-seat.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish to coopers and others an improved plug for testing barrels and other air-tight cooper work or packages, by which the compressed air is automatically retained in the barrels, leaving both hands of the operator free to handle the barrel, examine it closely, and stop the leaks without allowing the air to escape.

In the present method of testing barrels a wooden plug of conical shape, with a central hole bored through it, is used. This plug is driven into the bung-hole after the interior surface of the barrel or other receptacle has been wet by shaking it with a small quantity of water. The operator then compresses the air in the barrel by blowing through the tester, and prevents the escape of the air by placing his finger over the hole. The free use of the hands is thereby impossible, and the operator is obliged to allow the air to escape on the discovery of a leak, requiring often the repeated filling or "blowing-off" of the barrel before succeeding in making it thoroughly air-tight.

To remove these objections, my invention consists of a conical tester, with a central hole provided with a check-valve, by which the air remains compressed in the barrel until all the leaks are plugged.

In the drawing, A represents the conical plug, which is made by preference of brass or other suitable metal, wood being less advantageous, as it gets easily cut and bruised in handling the barrel, except by wrapping it up, which delays the workmen too much. Plug A is hollow and closed at its upper end by a disk, *a*, in the slight circular cavity of which the lips are placed, and the air blown in through the central hole *b*. The lower part of plug A guides in a circular perforation, *b'*, the vertical check-valve *d*, which rests by its disk-shaped end *d'* on the cross-bars *e* of valve-seat B. The stem of the valve *d* is of triangular or other shape, so that the air can pass between the sides of the bottom disk and the stem of valve *d*, when forced into the barrel, while the disk-shaped end *d'* closes perforation *b'* by the pressure of the compressed air in the barrel. The valve-seat B is screwed to the end of the plug, and admits the free passage of the air to the barrel. The blowing in of the air into the barrel is rendered less fatiguing by the immediate closing of the valve, which keeps the air compressed as long as needed for stopping the leaks, permits the free use of the hands for handling the barrel, and facilitates the work of producing air-tight barrels or other packages to a considerable degree.

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

The improved tester-plug, for barrels and other air-tight receptacles, consisting of a hollow conical plug with entrance-hole and vertical check-valve, constructed and operated substantially as and for the purposes described.

JOHN ALLIN.

Witnesses:

R. N. BAUGH,
THEODORE ROBBINS.