

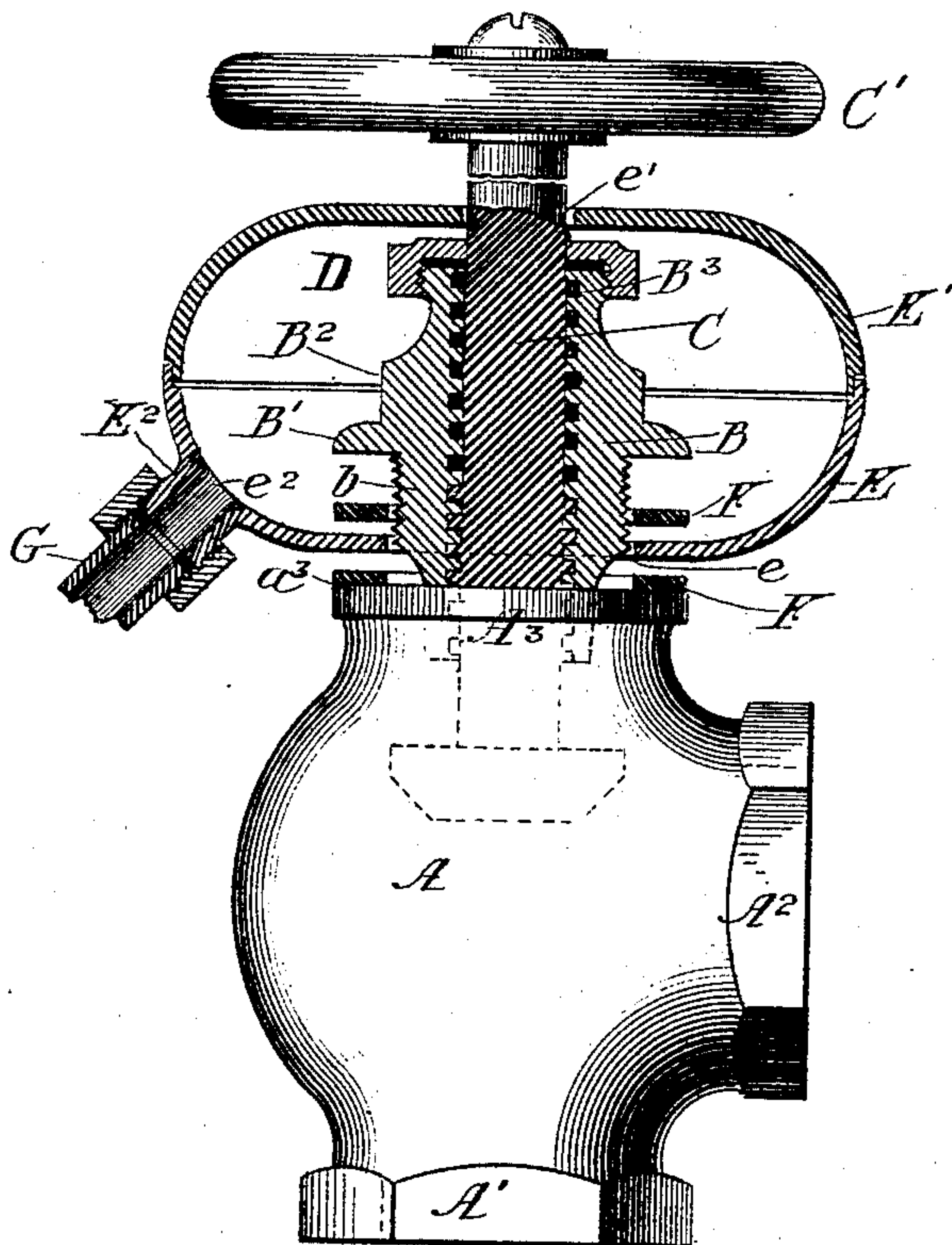
(No Model.)

P. HARVEY.

VALVE.

No. 354,414.

Patented Dec. 14, 1886.



Witnesses:

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UNITED STATES PATENT OFFICE.

PATRICK HARVEY, OF CHICAGO, ILLINOIS.

VALVE.

SPECIFICATION forming part of Letters Patent No. 354,414, dated December 14, 1886.

Application filed February 24, 1886. Serial No. 193,078. (No model.)

To all whom it may concern:

Be it known that I, PATRICK HARVEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Valves, of which the following specification contains a full and correct description.

The purpose of this invention is to provide an attachment for valves, which may be applied to valves already in common use, whereby any leakage about the stem, due to imperfect packing, may be conducted to a waste-pipe without danger of first overflowing upon the floor or walls of the room wherein the valve may be located. It is particularly designed to be applied to valves which control the supply and waste ports of steam-heating apparatus, or "radiators," so called, wherein the inconvenience of such leakage is greatest because such apparatus is necessarily located often in proximity to upholstery, carpets, and ornamented walls or floors, where escaping water will cause serious damage.

In the drawing, the figure is a partly sectional elevation of a valve and my improvement, the several parts being shown detached and separated by short intervals, but in position to show their relations to each other when joined as in use.

A is the valve body or globe, of which A' is the supply-port, A² the discharge-port, and A³ the plug-aperture.

B is the plug, exteriorly threaded to fit the plug-aperture in the valve-body, and interiorly threaded longitudinally for the valve-stem C. The plug is of the usual form of such part of a common screw-down valve, and has the shoulder B', adapted to bind against the shoulder a³ of the valve-body around the plug-aperture A³. It has, also, the polygonal wrench-receiving rim B² above the shoulder B', and the exteriorly-threaded nipple end B³ above said polygonal rim B², onto which the usual packing-box or annular cap, D, is screwed. The valve-stem C, which passes through the plug and packing-box has a removable cross-handle or hand-wheel, C', at the upper end.

E is the leakage-receiving cup. It has at the center the circular opening e, large enough to admit the lower nipple end, b, of the plug B,

but not large enough to prevent the said cup E being bound at the bottom between the shoulder a³ of the valve-body A and the shoulder B' of the plug B. Lead packing-gaskets F F may be interposed between the bottom of the cup E and said shoulders, respectively. The cup E may have the cover E', provided with the central opening, e', to allow it to be slipped onto the valve-stem. The contiguous edges of the cup and its cover are preferably rabbeted, as illustrated, to retain them in engagement. The cup E has the opening e² at one side of the bottom, which leads through the exterior nipple, E², and to said nipple is designed to be coupled the waste-pipe G, which may lead to any convenient point for the discharge of the leakage.

The parts are assembled in the following order: The body and plug constituting the ordinary valve being screwed apart, and the handle C' of the valve-stem C being detached, a gasket, F, is slipped on over the nipple end b of the plug and moved up against the shoulder B'. The cup E is then slipped onto the same end. A second gasket, F, follows, and the plug being inserted through the aperture A³ in the body, is screwed down until the shoulder B' binds the cup E and the packing-gaskets F F firmly between it and the shoulder a³. The cover E' is next slipped on over the end of the valve-stem C, and the handle is again secured in place on the stem.

Before tightening the plug-shoulder B' down upon the bottom of the cup E, care will be taken to turn the latter to such position as will bring the waste-nipple E² at whatever point it is desired to connect it with the waste-pipe; and one advantage of this structure over others somewhat similar in purpose is that the said waste-nipple can be set in any desired position regardless of the thread on the plug—that is to say, regardless of the point at which any fixed point on the circumference of the plug may stand when the latter is screwed up tight—and that, hence, when it is necessary to unscrew the plug for the purpose of dressing or packing the valve or its seat or removing obstructions, the plug may be reset and brought tight, even though by reason of wear of the threads or shoulders or change of the thickness of the gaskets it should

not become tight at the same point as before, without in any degree disturbing the connection of the waste-nipple E² with the waste-pipe G.

I am aware that valves have heretofore been made having waste or leakage receiving cups, and that such leakage-receptacles have been connected with the waste-pipe, and I do not claim these features, broadly.

I claim—

10 1. In combination with the valve-body and the valve-plug having binding-shoulders opposed to each other, the leakage-receiving cup encircling the plug-nipple and bound between the plug-shoulder and the valve-body shoulder, and made of a separate piece from both
15 said body and plug, substantially as set forth.

2. In combination with the valve-body and the valve-plug having binding-shoulders opposed to each other, the leakage-receiving cup
20 encircling the plug-nipple and bound between the plug-shoulder and the valve-body shoulder,

and having a waste-aperture at one side, substantially as set forth.

3. In combination with the valve-body and the valve-plug having binding-shoulders opposed to each other, the leakage-receiving cup encircling the nipple and bound between the plug-shoulder and the valve-body shoulder and having a waste-aperture at one side, and a cover for said cup, whose height, added to
25 that of the cup, is sufficient to inclose the packing-box at the upper end of the valve-plug, and having an aperture to admit the valve stem, substantially as set forth.

In testimony whereof I have hereunto set my
35 hand, in the presence of two witnesses, at Chicago, Illinois, this 10th day of February, 1886.

PATRICK HARVEY.

Attest:

CHAS. S. BURTON,
WILLIAM F. WIEMERS.