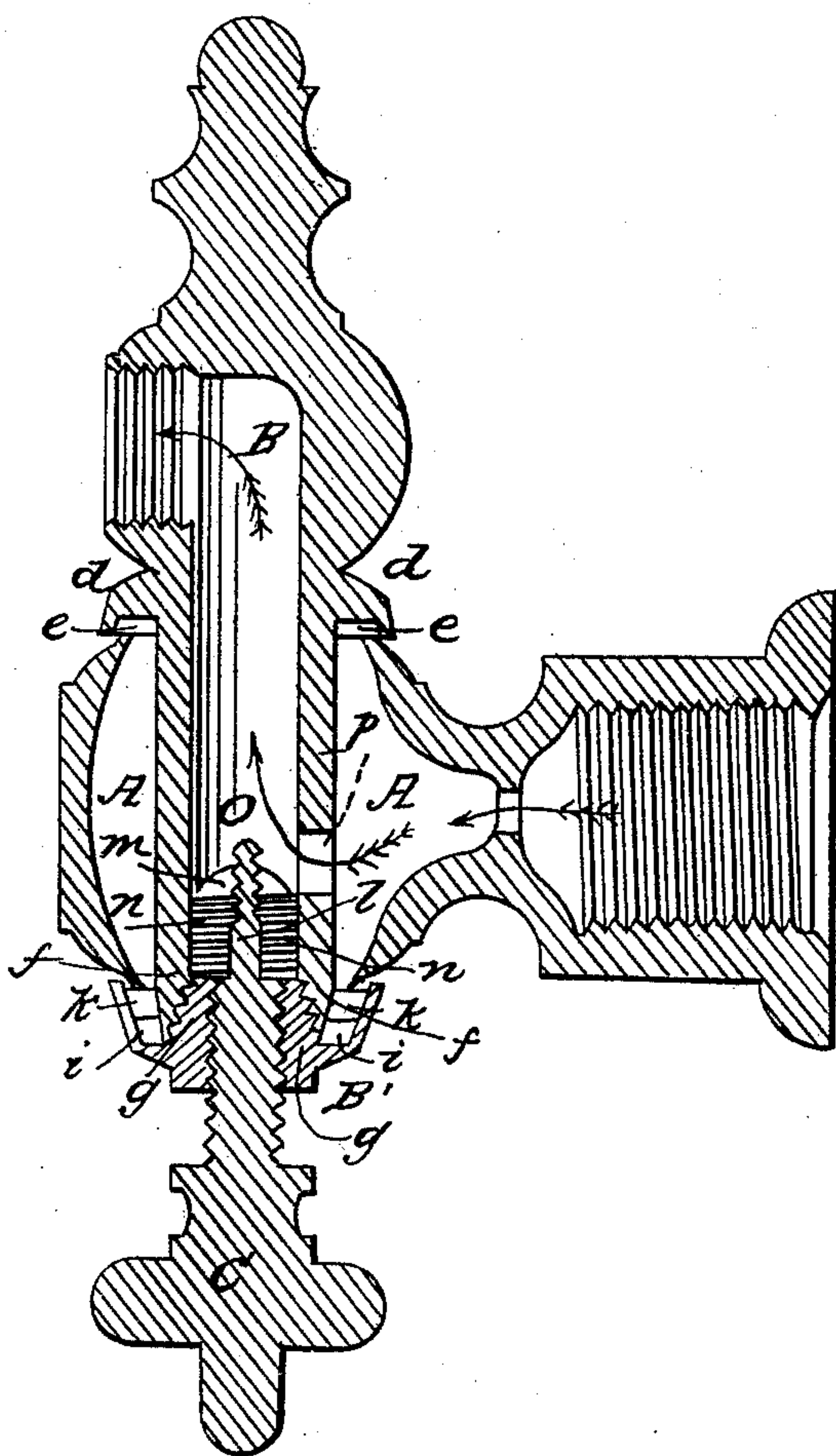


C. F. THIEME.

Gas Cock.

No. 16,129.

Patented Nov. 25, 1856.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES F. THIEME, OF PHILADELPHIA, PENNSYLVANIA.

GAS-COCK AND SWINGING JOINT.

Specification of Letters Patent No. 16,129, dated November 25, 1856.

To all whom it may concern:

Be it known that I, C. F. THIEME, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and Improved
5 Gas-Cock and Swing-Joint; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, making a part
10 of this specification, by which is represented an enlarged longitudinal section through the middle of the apparatus.

"Gas-cocks" and "swing-joints" have heretofore been constructed as separate devices, with distinct "barrels"—one for the
15 "swing plug," and the other for the "key" or cock—and each of these requiring to be accurately bored, and the plug and key turned upon a lathe and then "ground in"
20 their respective barrels, in order to make them work properly, and "gas tight." Consequently their construction requires the best workmen, besides a double adjustment for each apparatus. Hence, to simplify and
25 thus reduce the cost of construction without in the least diminishing their capabilities, is a matter of importance both to the trade and the public; and this is the object of my invention.

30 It consists in so constructing the "swing plug" and its "barrel," as to dispense with the boring, turning and grinding, heretofore required; and also, in combining the "swing-plug" and "key," together so as to
35 serve the double purpose of a "swing-joint" and "cock"—dispensing with the usual separate and distinct key-barrel.

Referring to the drawing—A, is the "barrel;" B, the "swing-plug," and C, the "key."
40 The barrel (A) is cast hollow, and open at each end—the inner side being left rough; the two ends only, being smoothed around their edges. The stem of the swing-plug (B) is made tubular throughout, but the
45 plug proper, or that part which enters within the barrel is made considerably less in its diameter than the inside of the barrel, and has around its upper end, a grooved or rimmed shoulder (*d*), which is cast on, so as to
50 extend over and cover the upper end of the barrel when applied thereto; and has also a leather washer (*e*), seated in its groove so as to come in contact with and fit and move gas-tight upon the upper edge of the said
55 barrel, when the plug is drawn down upon the latter, as will presently be described.

The lower end of the swing-plug (B) extends down to, or projects a short distance through, the lower end of the barrel, and has a screw thread (*f*) on its inner side at this
60 point, into which screws a central projection (*g*), which forms part of the cap or covering (B') of the lower end of the barrel. This cap is also made with an annular groove. This groove is fitted with a spiral spring
65 (*i*) and over and in contact with this, a leather washer (*k*), so that when the cap is screwed up, the said washer (*k*) bears, gas-tight though not rigidly, against the lower end of the barrel (A), and at the same time
70 draws the plug downwardly, causing also its leather washer (*e*) to make a like gas-tight joint at the upper end of the barrel, as before stated, and without impairing the requisite swinging capacity of the plug; and the
75 side of the plug being bored through, so as to form the opening (*p*) for the passage of the gas from the barrel, it serves the purpose of a swing-joint, when as in jointed brackets, a key or cock is not required at this part. 80

In fitting a key to the joint just described, the center of the cap (B') is bored, and the key (C) made so as to be moved up and down therein, by rotary motion, on screw threads—its upper end (*l*) being also re-
85 duced in diameter, threaded, and fitted with a small nut (*m*) so as to hold thereon a series of leather rings (*n*) whose respective diameters equal the diameter of the bore (*o*) in the plug—thus forming a piston therein. 90
The length of range which is permitted to the key, is only sufficient to cause the leather piston packing to close and inclose the side opening (*p*) which is made in the plug.

Operation: The plug being inserted in the
95 barrel, and the cap (B') screwed into cemented connection with the lower end of the same—the edges of the leather rings (*m*) having been previously greased—the apparatus is ready for application and use, both
100 as a "swing-joint and cock." When so applied, and the key (C) screwed up to its shoulder, no gas can pass through the plug, nor out of the barrel—but when the said key is screwed down, the gas passes freely and
105 only through the side opening (*p*) in the plug—as shown by the arrows in the figure. And if required to be used only as a "swing-joint," the key (C) may be dispensed with, and the center hole of the cap (B') stopped
110 with a plug, or left unbored.

The advantages of this invention consist,

as before stated, in its greater simplicity, and consequent diminished cost of construction. The apparatus can be produced by ordinary workmen, or boys, and nearly thirty
5 per cent cheaper than the old kind; while they are equally perfect and serviceable; and none the less convenient in use.

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

10 1. Making a "swing-joint" for gas brackets, substantially as described; the same consisting of the tubular plug (B), and its cap (B') with the leather washer (k) and spring (i) or their equivalents; in combination
15 with the barrel (A) constructed as set forth

and described; so as to produce a gas-tight "swing-joint," without the usual boring and grinding heretofore required, as described.

2. I also claim the combination of the key with the lower end of the plug, when the
20 same is used as a "gas-cock;" so as to dispense with a distinct barrel heretofore required for a "cock;" the said key being constructed, combined and operating substantially in the manner set forth and described. 25

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Witnesses: -

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