

(No Model.)

J. OLD.
GAGE COCK.

No. 303,452.

Patented Aug. 12, 1884.

Fig 1.

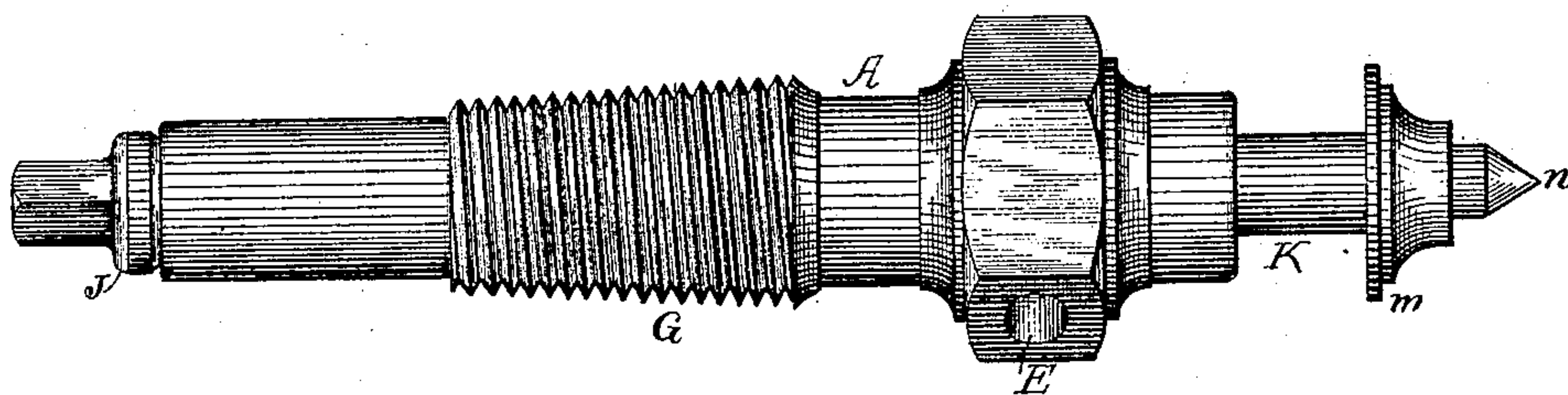


Fig 2.

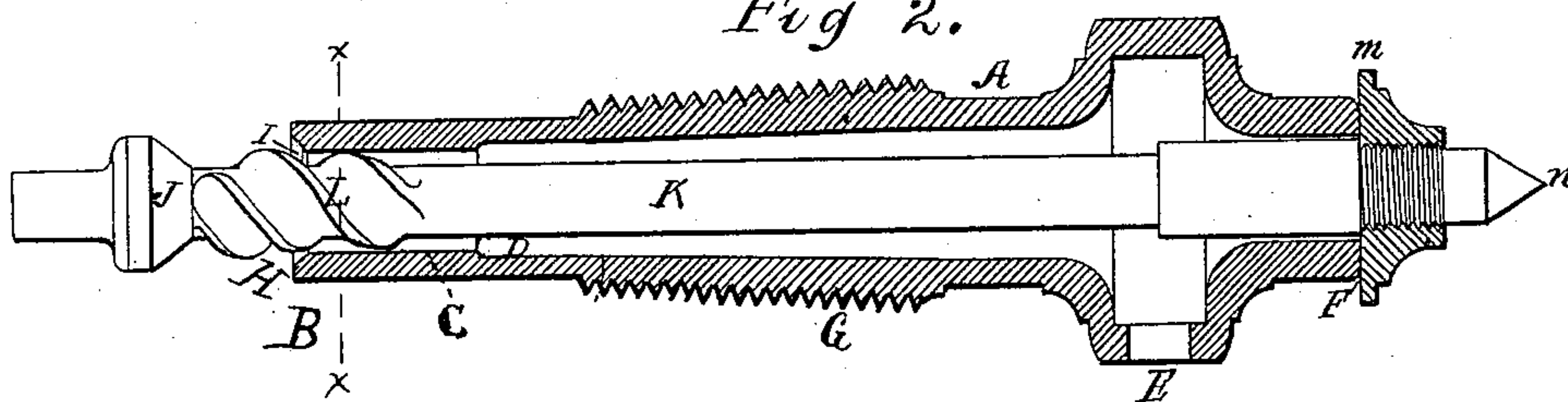


Fig 3.

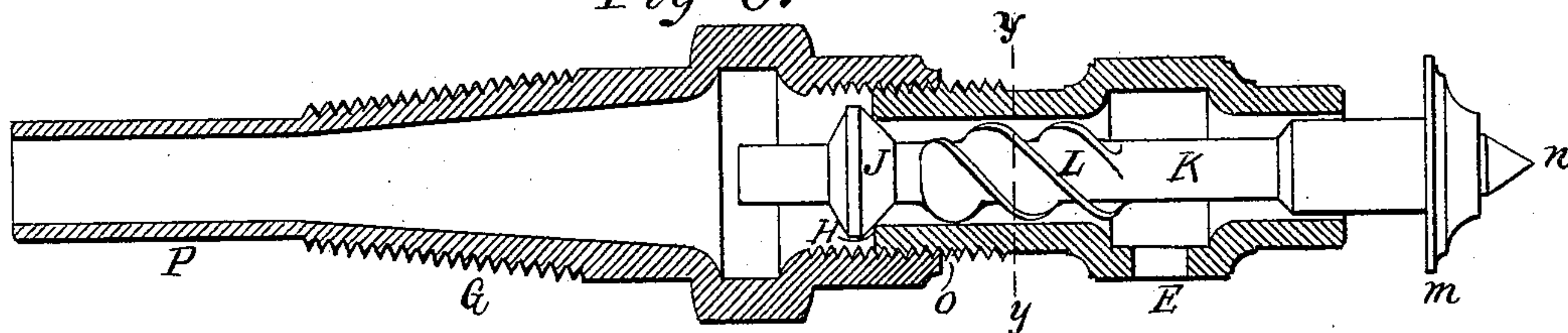


Fig 4.

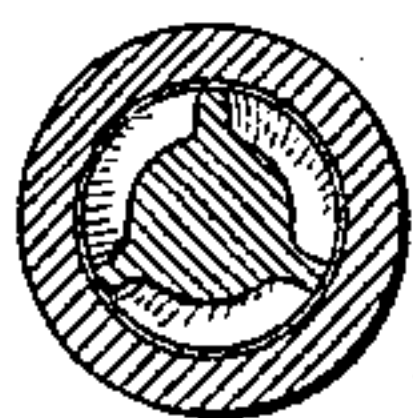
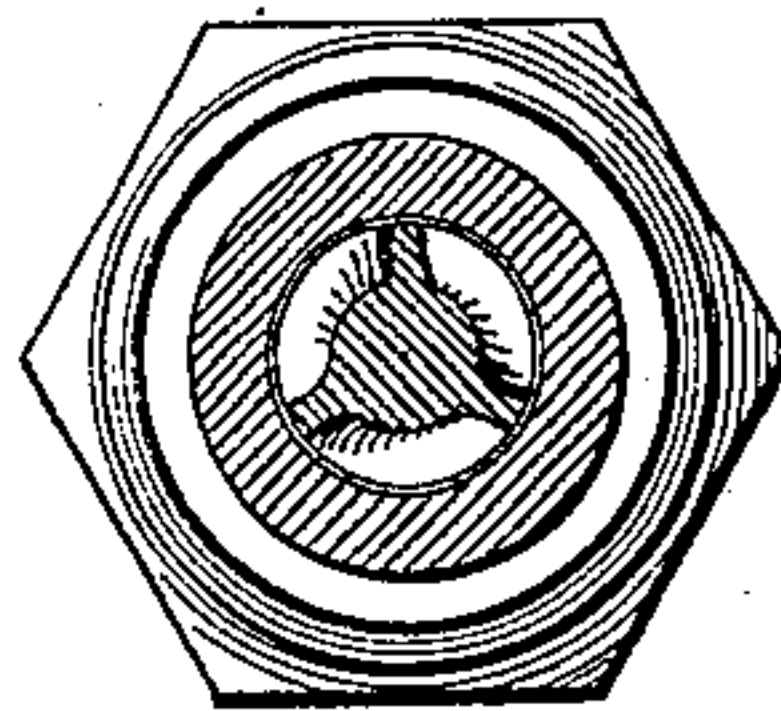


Fig 5.



WITNESSES.
C. S. Johnston.
J Ross

INVENTOR.
James Old
By his Attorney
A. C. Johnston

UNITED STATES PATENT OFFICE.

JAMES OLD, OF ALLEGHENY, PENNSYLVANIA.

GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 303,452, dated August 12, 1884.

Application filed December 18, 1882. Renewed January 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES OLD, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Water-Gages for Steam-Boilers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to improvements in water-gages for steam-boilers, and has for its object the more complete drainage of the valve-chamber.

My invention consists in the means hereinafter described and claimed for effecting said object.

To enable others skilled in the art with which my invention is most nearly connected, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a side view of my improvement in water-gages. Fig. 2 is a longitudinal section of the same. Fig. 3 is a longitudinal section representing a modified construction of the same. Fig. 4 is a transverse section at line *x x* of Fig. 2. Fig. 5 is a transverse section at line *y y* of Fig. 3.

Reference being had to the accompanying drawings, A represents the case, the bore of which from B to C is a straight cylinder or chamber, D, and from C toward the vent E is of conical form, so that the water and product of condensation will flow toward said vent, and be discharged from the case A. By this arrangement of the inner walls of the case it will be washed out by the steam and water and not be liable to the clogging up common to valves of this class. The case A is provided with the ordinary screw-threads, G, for securing it in position in the end or head of the boiler. The inner end, H, of the case A is provided with a seat, I, for the valve J, which seat and valve are of ordinary construction. The stem K is provided with spiral wings L, which are fitted to the bore of the chamber D. The outer end of the stem is provided with the usual cap or flange, *m*, and the extreme end *n* of said stem is made

conical, for allowing the stem to easily rotate when the operator is pressing against the conical part with the gage-stick in the operation of testing the state of water in the boiler.

The conical end *n* may be constructed of steel or other hard metal. Preference is given to this construction on account of being more durable and less liable to become impaired.

The modification of my improvement in water-gage valve shown in Fig. 3 consists in having the chamber D arranged in the forward part of the case A, and the spiral wings L correspondingly arranged on the stem K, and constructing the case A in two or more parts, united by screw-threads at *e*. The part *p* can be made of ordinary gas-pipe. In all other respects the gage-valve is the same, and operates in the same manner, and its operation is similar to the ordinary gage-valve, excepting that its stem rotates in the operation of testing and seating the valve differently at each testing, and in the peculiar form of the bore of the case A, for the purpose hereinbefore stated.

I am aware that gage-cocks in which the valve-stem is provided with spiral wings by whose action rotary motion is imparted to the valve, whereby the latter is prevented from clogging and at the same time differently seated at each operation of said valve, have been already patented. Such a device I therefore do not claim; but

What I do claim is—

In a gage-cock, the combination, with the stem K, provided upon its inner extremity with valve J, and having spiral wings L, extending radially from said stem for a short distance in front of said valve, of the case A, provided with cylindrical chamber C in front of the valve-seat I, and corresponding in its length with that of wings L, and having conical or enlarging chamber extending from said cylindrical chamber to the vent, substantially as described, whereby the draining of the valve-chamber is insured, as set forth.

JAMES OLD.

Witnesses:

A. C. JOHNSTON,
L. M. SLACK.