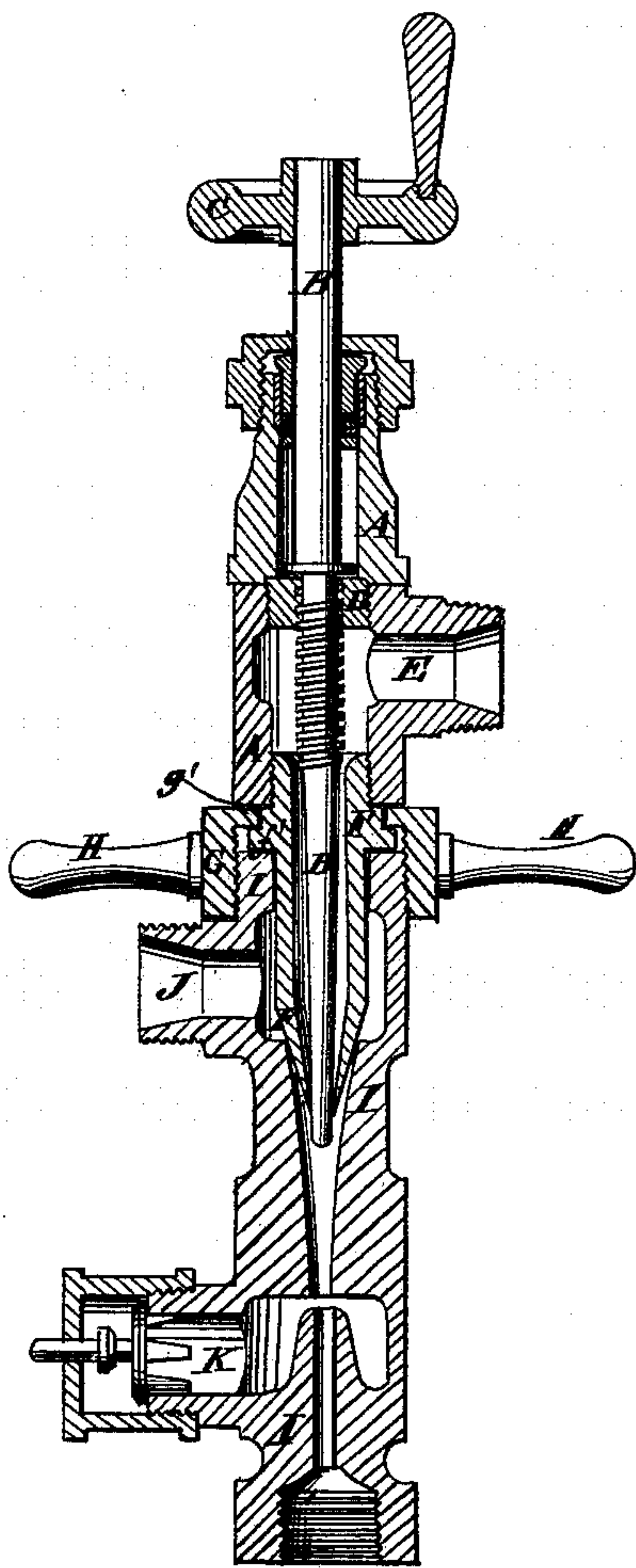


J. WESTLEY.

INJECTOR FOR STEAM BOILERS.

No. 188,707.

Patented March 20, 1877.



WITNESSES:

A. W. Almqvist
J. H. Scarborough

INVENTOR:

James Westley
BY *Mumford*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES WESTLEY, OF SALFORD, MANCHESTER, ENGLAND, ASSIGNOR TO
HIMSELF AND JOHN MORRIS, OF SAME PLACE.

IMPROVEMENT IN INJECTORS FOR STEAM-BOILERS.

Specification forming part of Letters Patent No. **188,707**, dated March 20, 1877; application filed
October 23, 1876.

To all whom it may concern:

Be it known that I, JAMES WESTLEY, of Salford, Manchester, in the county of Lancashire, England, have invented a new and useful Improvement in Injectors for Steam-Boilers, of which the following is a specification:

The figure is a longitudinal section of my improved injector.

The object of this invention is to furnish an improved water-injector for steam-boilers, which shall be so constructed as not to require any internal packing; as to prevent locking or bursting and side leakage; as to work equally well at any pressure of steam, and enable them to be detached, examined, and again attached in a few minutes without interfering with the working of the boiler, and which will not be liable to get out of order.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A is the outer part of the injector, through a stuffing-box in the outer end of which passes the spindle B. The spindle B has a hand-wheel, C, or other handle attached to its outer end, and a screw-thread formed upon its middle part, which fits into a female screw, D, in the part A, at the outer side of the steam-inlet E. The forward part of the spindle B passes into the nozzle F, the base of which

is screwed into the inner end of the part A. Around the base of the nozzle F is formed a flange, *f'*, which abuts against the end of the part A, and is rabbeted upon its outer side to form a ring-groove to receive an inwardly-projecting flange, *g'*, formed upon the outer part of the inner surface of the ring or wheel G. The ring or wheel G is provided with handles H, for convenience in turning it, and has a screw-thread formed upon the inner surface of its inner part, to receive the screw-thread formed upon the outer end of the part I, with which, near its outer end, is connected the water-inlet J. With the part I near its inner end is connected the overflow K. With this construction by turning the ring or hand wheel G, the water-supply can be regulated according as the steam-pressure in the boiler may require.

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

The combination, with parts A I, having respectively steam-inlet E and water-inlet J, of the nozzle F, adjustable by a ring, G, and an adjustable cone-spindle, B, arranged substantially as and for the purpose specified.

JAMES WESTLEY.

Witnesses:

MATTHEW MITCHELL,
WILLIAM HICKEY.