

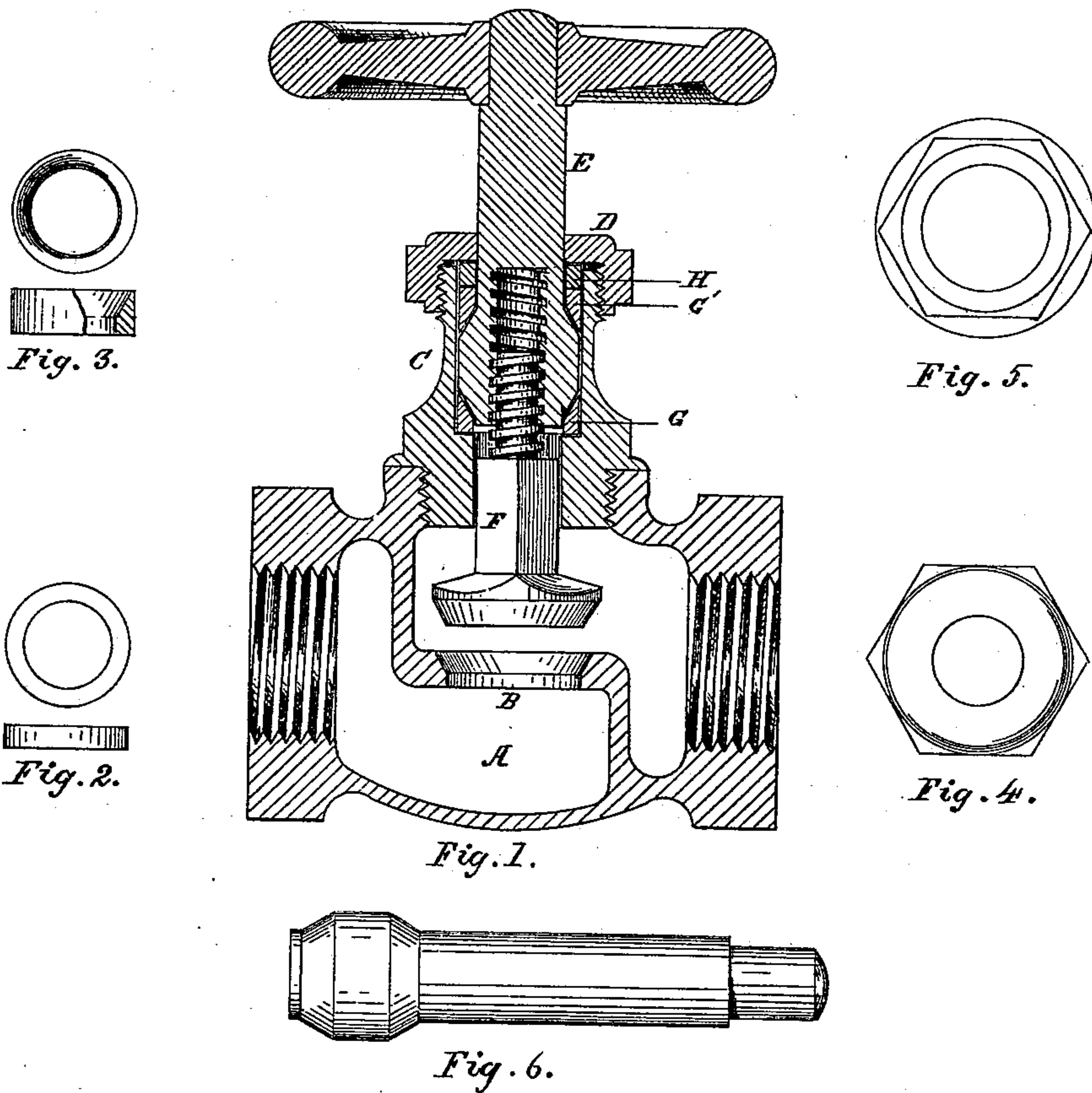
(No Model.)

M. M. ZELLERS.

VALVE.

No. 272,827.

Patented Feb. 20, 1883.



Witnesses:

Dayton A. Doyle
E. W. Stuart

Inventor:

Mahlon M. Zellers,

by *C. P. Humphrey*

Atty.

UNITED STATES PATENT OFFICE.

MAHLON M. ZELLERS, OF KENT, OHIO.

VALVE.

SPECIFICATION forming part of Letters Patent No. 272,827, dated February 20, 1883.

Application filed March 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, MAHLON M. ZELLERS, of Kent, in the county of Portage and State of Ohio, have invented a new and useful Improvement in Valves, of which the following is a specification.

My invention relates to and is an improvement upon the valve for which a patent, No. 237,794, was granted to me February 15, 1881.

The objects of my invention are to render the rotary operating-stem self-packing and self-centering, to provide for taking up wear in the operating-stem, and to simplify the construction of the valve. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical central section of a valve embodying my invention, and in which A is the valve-casing with valve-seat B. A guide-nut, C, a plan of which is shown in Fig. 5, screws into the casing A, and has a screw-thread upon its upper end, upon which screws the cap D, a plan of which is shown in Fig. 4. The opening in the guide-nut is polygonal at the bottom to loosely fit the valve-stem F, and above it is circular, of even diameter throughout, bored to admit the largest part of the operating-stem E. This latter stem is a circular rod of even diameter, excepting near the lower end it is enlarged, with conical shoulders above and below the larger part. In its lower end is a screw-threaded orifice, adapted to receive the screw-threaded stem F. Fitting within the larger orifice of the guide-nut is an annular packing-ring, G, (shown in plan, elevation, and partial section in Fig. 3,) of metal or other suitable material, and adapted to fit the conical shoulder and lower end of the operating-stem E and project beyond it. A similar ring, G', is placed upon the upper conical shoulder of the operating-stem. Upon this latter ring rests another ring, H, (shown in elevation and section in Fig. 2,) upon which the cap D presses. The office of this ring is to insure

even pressure on the ring G' and avoid friction between it and the cap D in the event that it should revolve with the stem E. The rings G G' are preferably made of a metal softer than the stem E, but may be of any material suitable for the work to be performed, and being pressed by the conical shoulders they not only form a close joint therewith, but, being expanded thereby, also form a close joint with the sides of the guide-nut. The effect of the conical shoulders is to keep the stem constantly central, whatever may be the wear, while any wear is instantly and effectively taken up by turning down the cap D. By this arrangement the springs shown in the valve upon which this is an improvement are omitted, and all parts are more easily reached for inspection or repair.

Although I regard the construction and arrangement here shown as preferable, I do not confine my invention to these exact devices; but the ring H may be omitted and the cap D rest upon the ring G'.

I claim—

The herein-described stop-valve, consisting of the valve-casing A, guide-nut C, having a polygonal orifice opening into the valve-casing, a polygonal valve-stem, F, fitting in said polygonal orifice, bearing the valve and terminating upwardly in a screw, a valve-operating stem, E, having its lower part enlarged with conical shoulders, and having a screw-threaded orifice to receive the screw of the valve-stem, packing-rings G G', resting on said conical shoulders, and cap D, all constructed and arranged as shown, and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand.

MAHLON M. ZELLERS.

Witnesses:

GEO. T. HOWDON,
M. A. NORRIS.