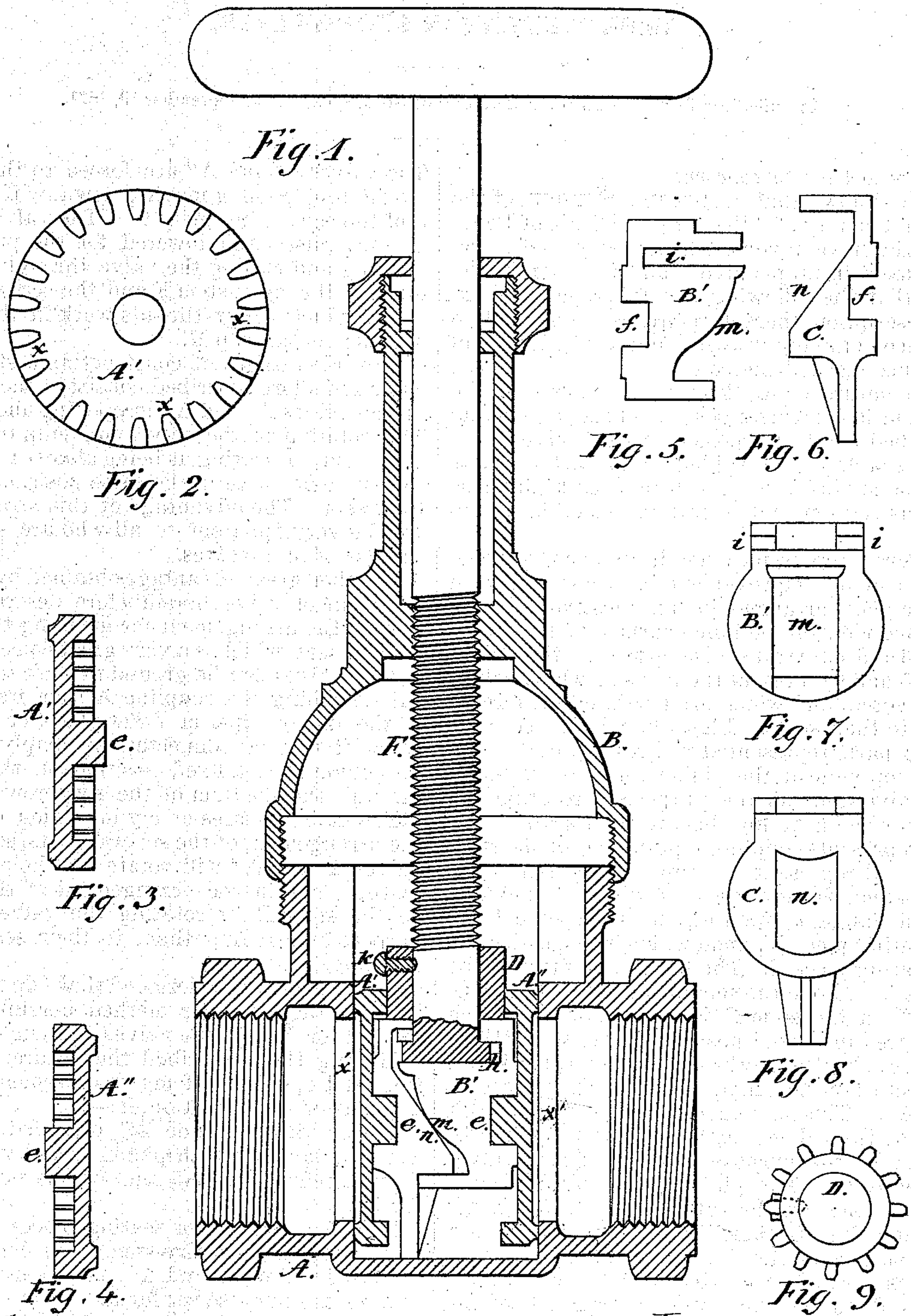


# AUGUST SNYDER. Improvement in Stop Valves.

No. 119,057.

Patented Sep. 19, 1871.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN STOP-VALVES.

Specification forming part of Letters Patent No. 119,057, dated September 19, 1871.

*To all whom it may concern:*

Be it known that I, AUGUST SNYDER, of the city and county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Stop-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the combination and arrangements of the parts herein described for the purpose of a stop-valve.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, which is as follows:

Figure 1 represents a longitudinal and vertical section of my improvement in stop-valve, with all the parts arranged in juxtaposition. Fig. 2 is a face view of the inner surface of the valve. Figs. 3 and 4 are transverse sections of the valves. Figs. 5 and 6 represent the parts on which valves are pivoted, and which are also used for forcing them to their seats. Figs. 7 and 8 are face views of the parts represented in Figs. 5 and 6. Fig. 9 is a top view of the pinion which is placed on the valve-stem for the purpose of rotating the valves when grinding them to their seats.

A represents coupling-pipe or body of the stop-valve. B represents its cap. F represents the valve-stem, the lower end of which is provided with a flange, *h*, upon which is suspended the separating piece B', upon which is suspended the separating piece C. The flange *h* is fitted in the recess *i*. Above the separating pieces B' and C, placed on the stem F, is the pinion D, which is secured in a fixed position on the stem F by a set-screw, *k*. The teeth of the pinion D mesh into the teeth *l* on the inner faces of the valves A' and A''. This arrangement of teeth on back faces of the valves, combined with the pinion D, is used for the purpose of grinding the valves to their seats. The pinion D is only held in a fixed position on the valve-stem F while grinding the valves to their seats. On the inner or back surface of the valves A' and A'' are projections *e*, which are fitted to recesses *f* of the pieces B' and C, the projecting parts *e* of the valves being the axis upon which they rotate.

The valves A' and A'' are forced to their seats by the projection *m* moving down on the incline *n* of the separating piece C. The valves A' and A'' are raised and lowered for the purpose of opening and closing the valve through the medium of the valve-stem F and the screw-threads on it, which screw-threads work in the screw-threads in the cap B.

The advantages of constructing a stop-valve as hereinbefore described consist in the rotating of the valves A' and A'' in opening and closing. This rotating of the valves prevents them from being cut in seating, it being almost impossible to seat them twice in the same position on or to their seat. The advantage of this arrangement will be very apparent to all who are skilled in the use of stop-valves.

Another great advantage obtained by the construction of valve hereinbefore described consists in the arrangement for grinding the valves to their seat, which is a very great consideration, for the valves can be ground to their seats without detaching the coupling A from its position in the line of pipe, or other place, or thing to which it may be connected, by simply securing the pinion D in a fixed position on the stem F through the medium of the set-screw K.

The main features of my invention consist in the arrangement of the several parts, so that the valves A' and A'' will rotate on their axis *e* in seating; and in the arrangement of the pinion on the stem F for rotating the valves for the purpose of grinding them to their seat in the coupling.

I wish it clearly understood that I do not claim, broadly, the means or method hereinbefore described for forcing the valves to their seat.

Having thus described the nature, construction, and operation of my improvement, what I claim as of my invention, is—

1. The valves A' and A'', provided with cogs *x*, in combination with pinion D and valve-stem F, as herein described, and for the purpose set forth.
2. The separating or seating pieces B' and C, suspended on the valve-stem F, in combination with the valves A' and A'', as herein described, and for the purpose set forth.
3. The valves A' and A'', provided with pro-

jections *e* for the purpose of pivoting them in the separating pieces B' and C, as herein described.

4. The arrangement of the valve-stem F, pinion D, separating pieces B' and C, and valves A' and A'' with relation to the openings *x'* in the valve-seats and valve-chamber, the whole con-

structed and operating in the manner hereinbefore described, and for the purpose set forth.

AUGUST SNYDER.

Witnesses:

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