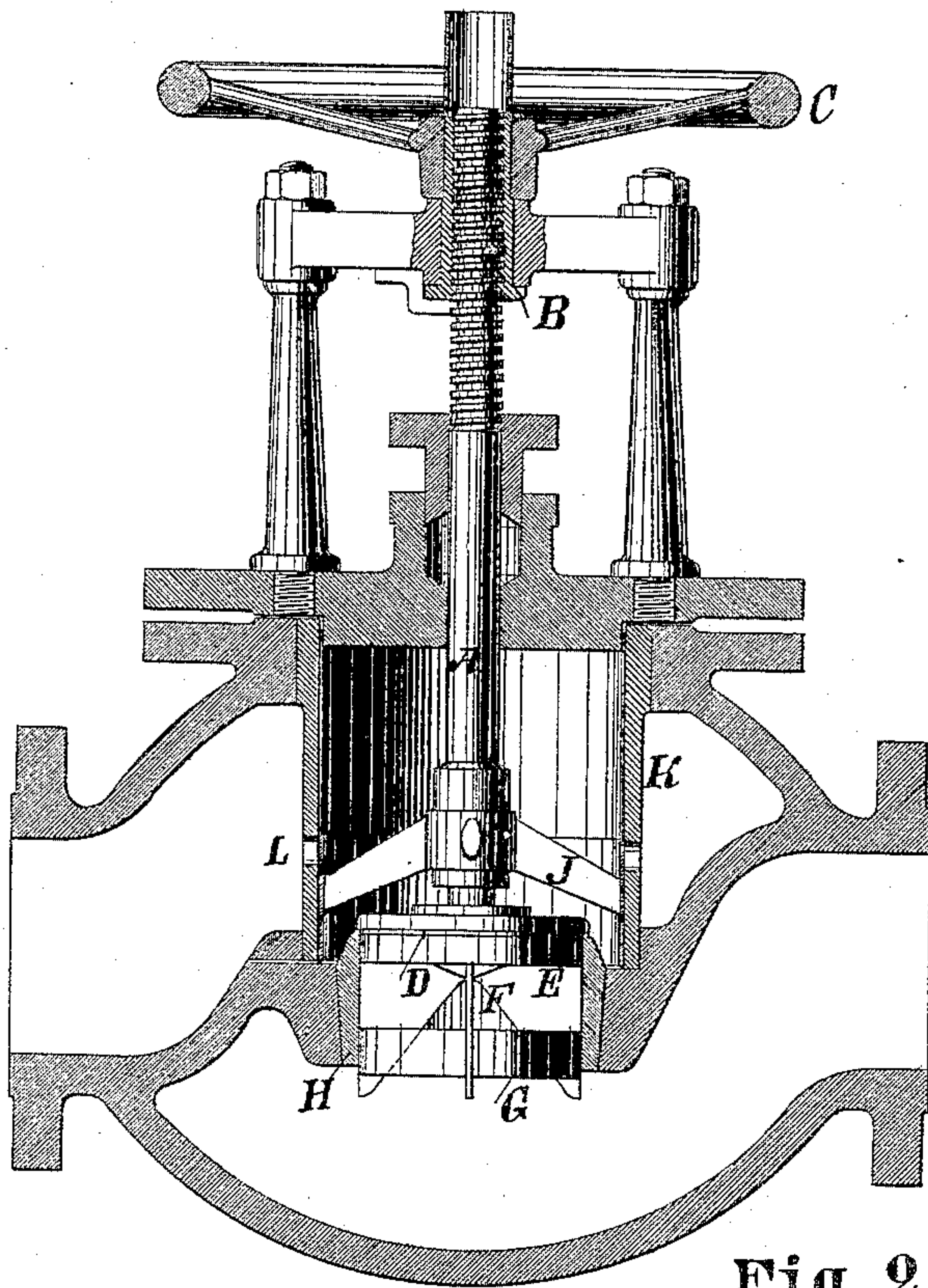


(No Model.)

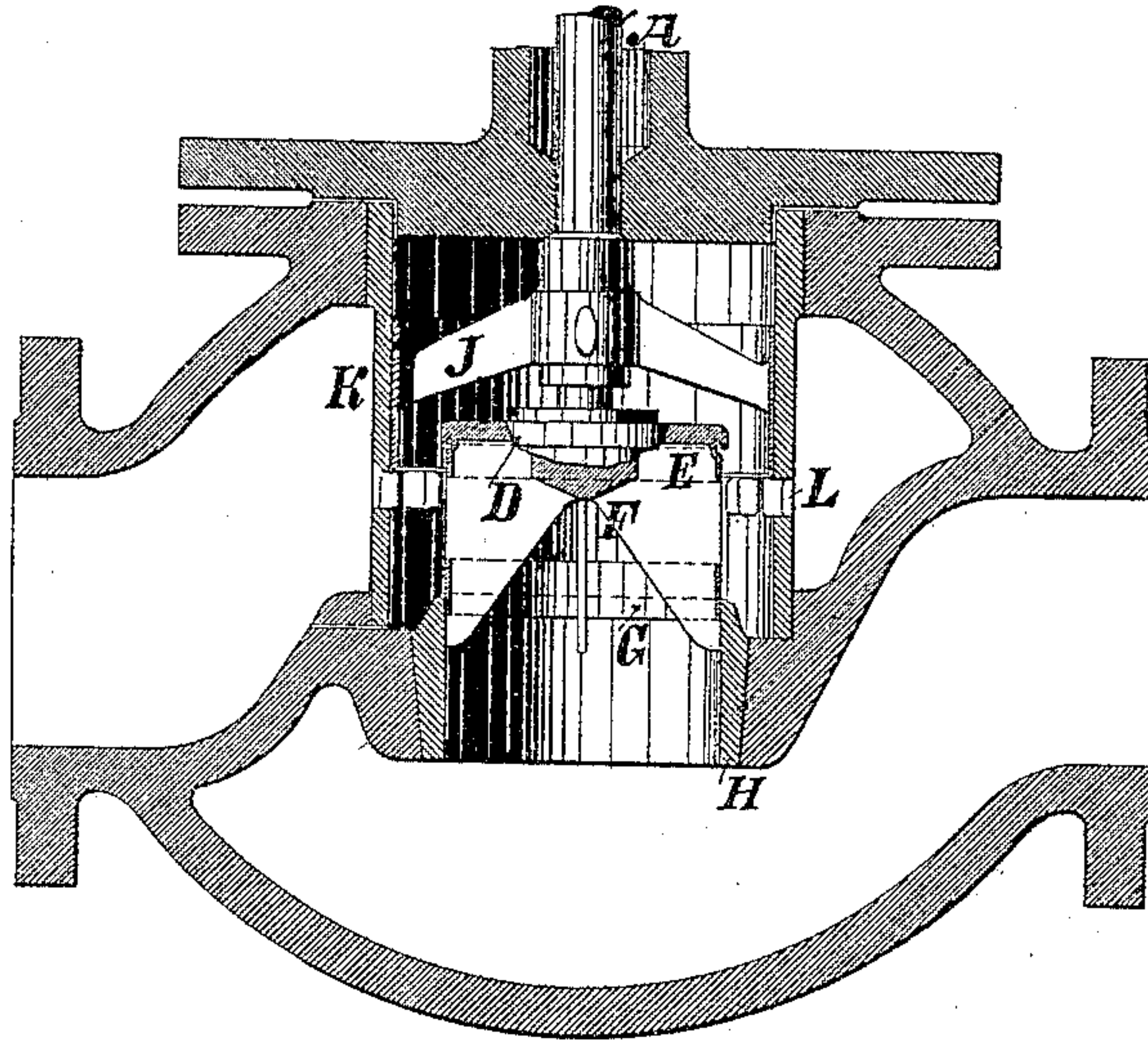
G. ADAM.  
STOP VALVE.

No. 436,884. **Fig. 1.**

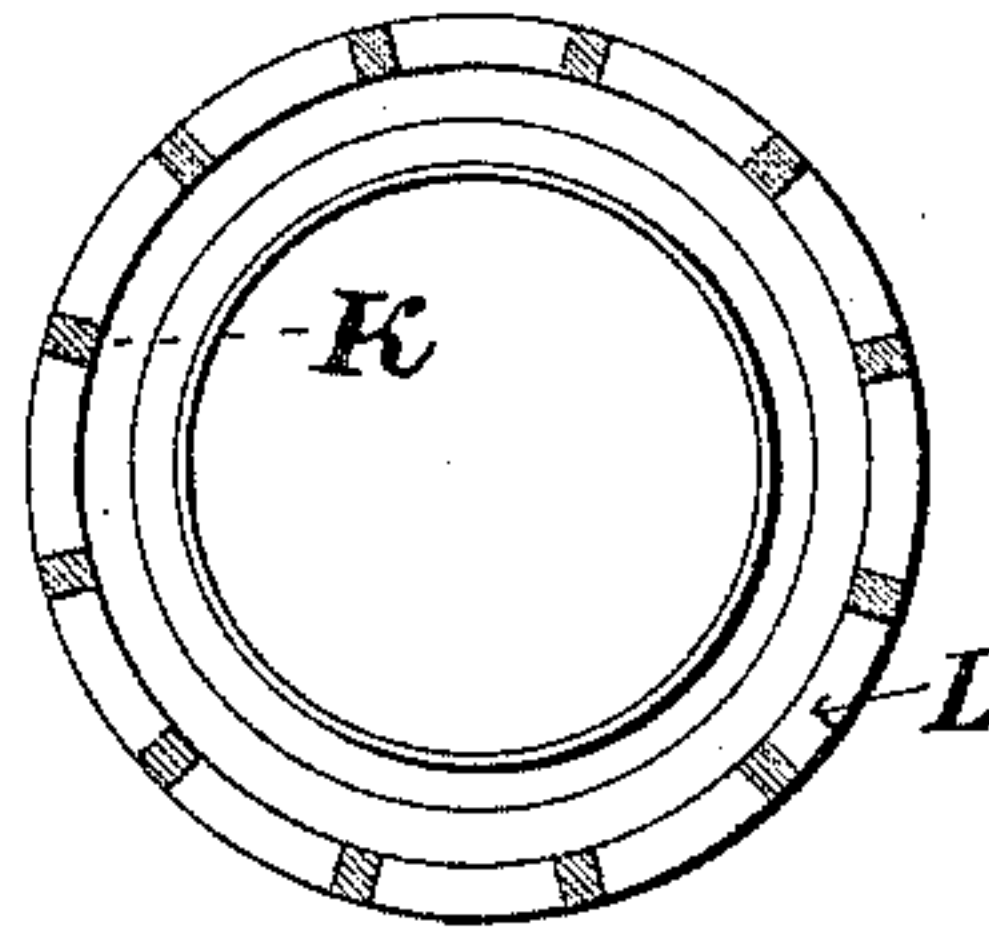
Patented Sept. 23, 1890.



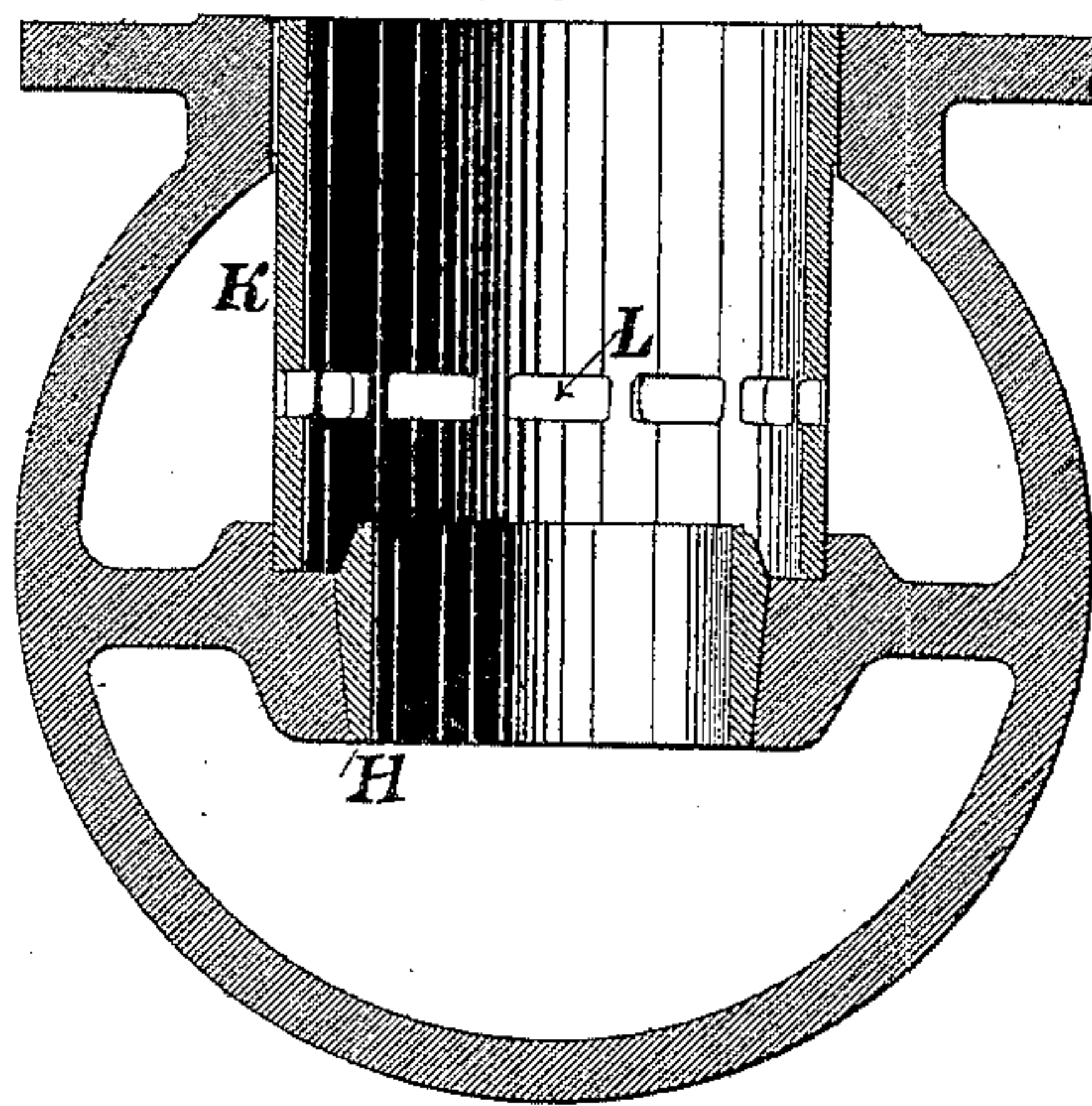
**Fig. 2.**



**Fig. 4.**



**Fig. 3.**



Witnesses:  
*Wm. Wagner*  
*A. Poughmans*

Inventor:  
*G. Adam*  
by his attorneys  
*Roeder & Briesen*



# UNITED STATES PATENT OFFICE.

GUSTAV ADAM, OF SEBNITZ, GERMANY.

## STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 436,884, dated September 23, 1890.

Application filed June 9, 1890. Serial No. 354,788. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAV ADAM, a subject of the King of Saxony, residing at Sebnitz, in the Kingdom of Saxony, German Empire, have invented a new and Improved Stop-Valve, of which the following is a specification.

My invention relates to an improved stop-valve; and the object of the invention is to reduce the wear of the tightening-surfaces both of the valve proper and of the valve-seat. In the stop-valves usually employed these tightening-surfaces are subject to wear from the steam or fluid acting directly against them. To prevent this wear I arrange rings on the valve proper, and I combine with the valve a bell or sliding ring, which shuts the passage of the steam or fluid until the valve proper has been fully opened or lifted from its seat.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a sectional elevation of the valve, showing it closed; Fig. 2, a similar view of the lower part thereof, showing it open. Fig. 3 is a vertical section through the box, and Fig. 4 a cross-section through the cylinder K above the valve.

The valve-rod A is guided with a screw-thread in a tapped sleeve or nut B, connected to the hand-wheel C, by which said rod may be raised or lowered. To the lower end of rod A the valve proper D is secured. At or near the upper portion of valve D a cylindrical ring E is cast upon it. Around the guide-webs F of the valve, at or near the lower end thereof, a similar ring G is cast or secured. The rings E and G serve to prevent wear and tear of the valve and seat and also to steady the valve D within its seat H.

On the rod A at a short distance above the

valve D there is carried a ring or bell J. The hub of this ring is keyed to the shaft A. The ring or bell J slides up and down with the rod A and closely fits into a cylinder K, within the circumference of which a suitable number of apertures L are provided, which apertures form the passage for the steam or fluid that flows through the valve. When the valve is closed, as in Fig. 1, the apertures L are also closed by the ring or bell J, the upper edge of which extends beyond said apertures. When the valve is opening and rising with the rod A, the apertures remain closed up to the moment when the valve D has reached the end of its course. At this point the lower edge of the ring or bell J has slid past said apertures and left the same open, as shown in Fig. 2. The steam or fluid may now freely pass through the apertures and through the open valve-seat H. The steam or fluid, while entering through the apertures L, flows freely past the upper portion of the valve D, and no injury is done to the active or tightening portion of said valve. When the valve is open, Fig. 2, the lower ring G takes a position opposite to the upper edge of the valve-seat H. Thus said edge is protected against any injury from the direct action of the passing steam or fluid.

What I claim is—

The combination of a perforated cylinder K with an inclosed reciprocating valve-rod A, a valve D on said rod, guide-rings on said valve, and with a ring J keyed to rod A above valve D, substantially as specified.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 19th day of May, 1890.

GUSTAV ADAM.

Witnesses:

RICHARD KLIPPGEN,  
ROBERT SPIRTH.