

(No Model.)

J. W. MOORE.
VALVE SEAT CLEANER.

No. 556,895.

Patented Mar. 24, 1896.

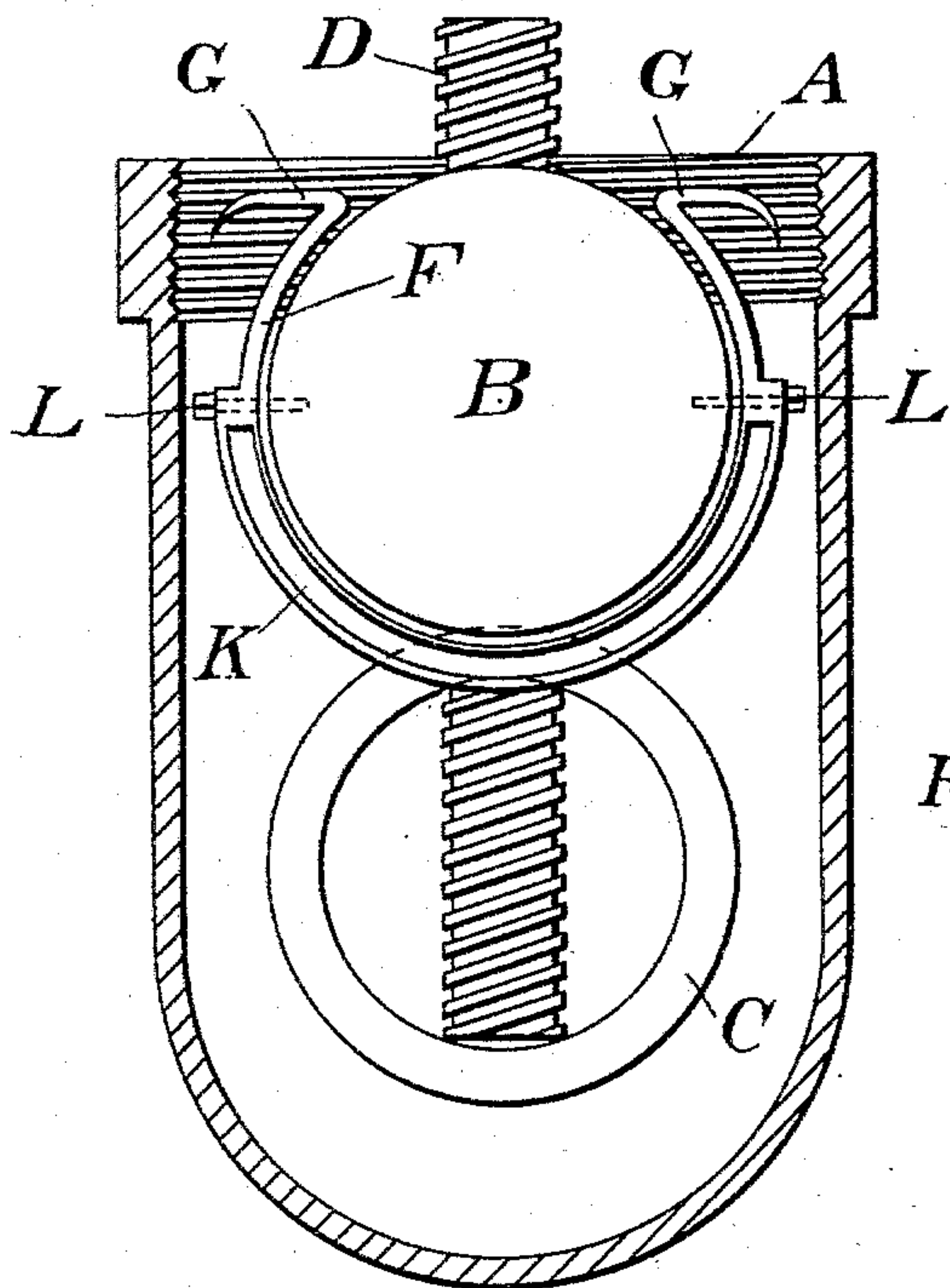


Fig. 1.

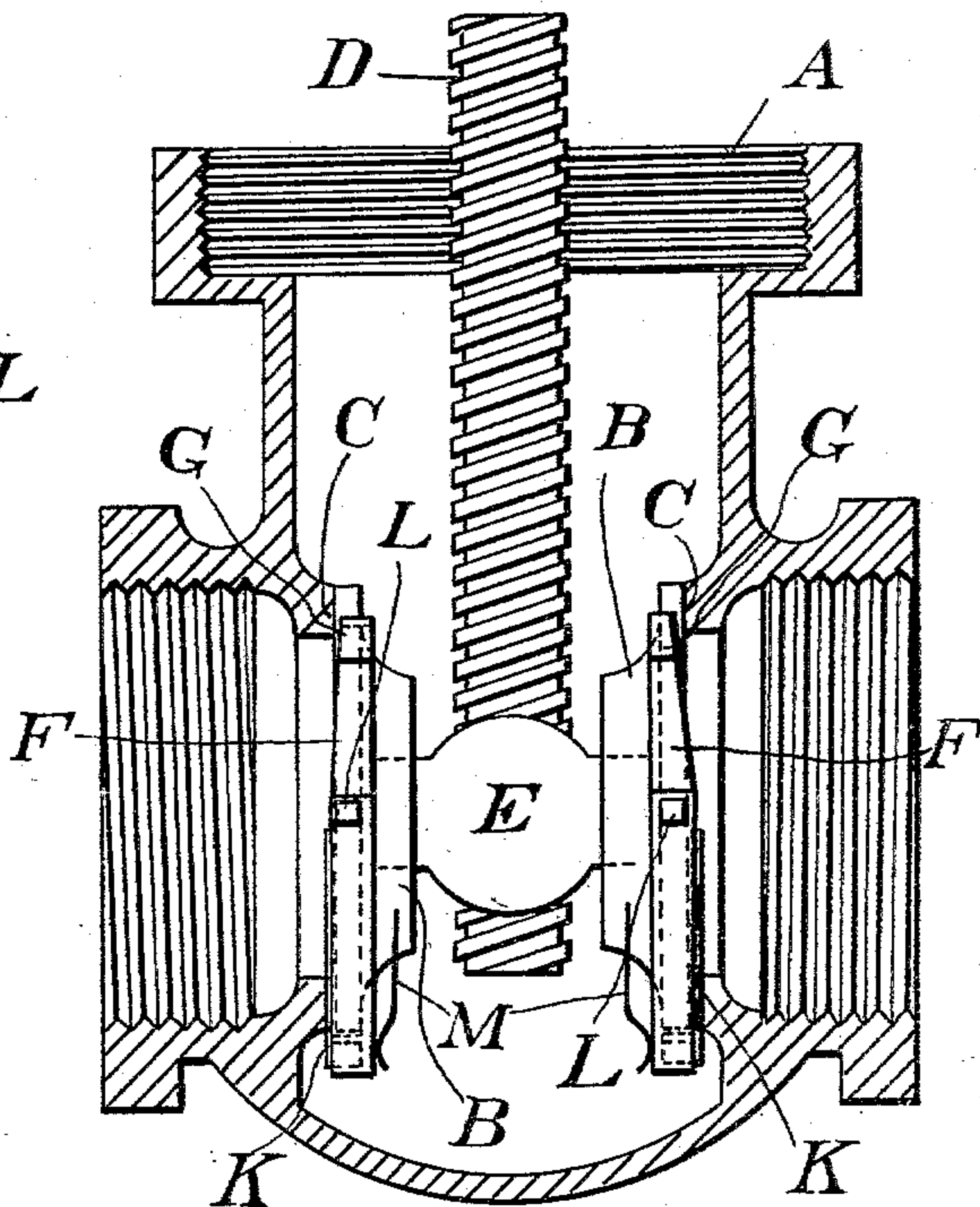


Fig. 2.

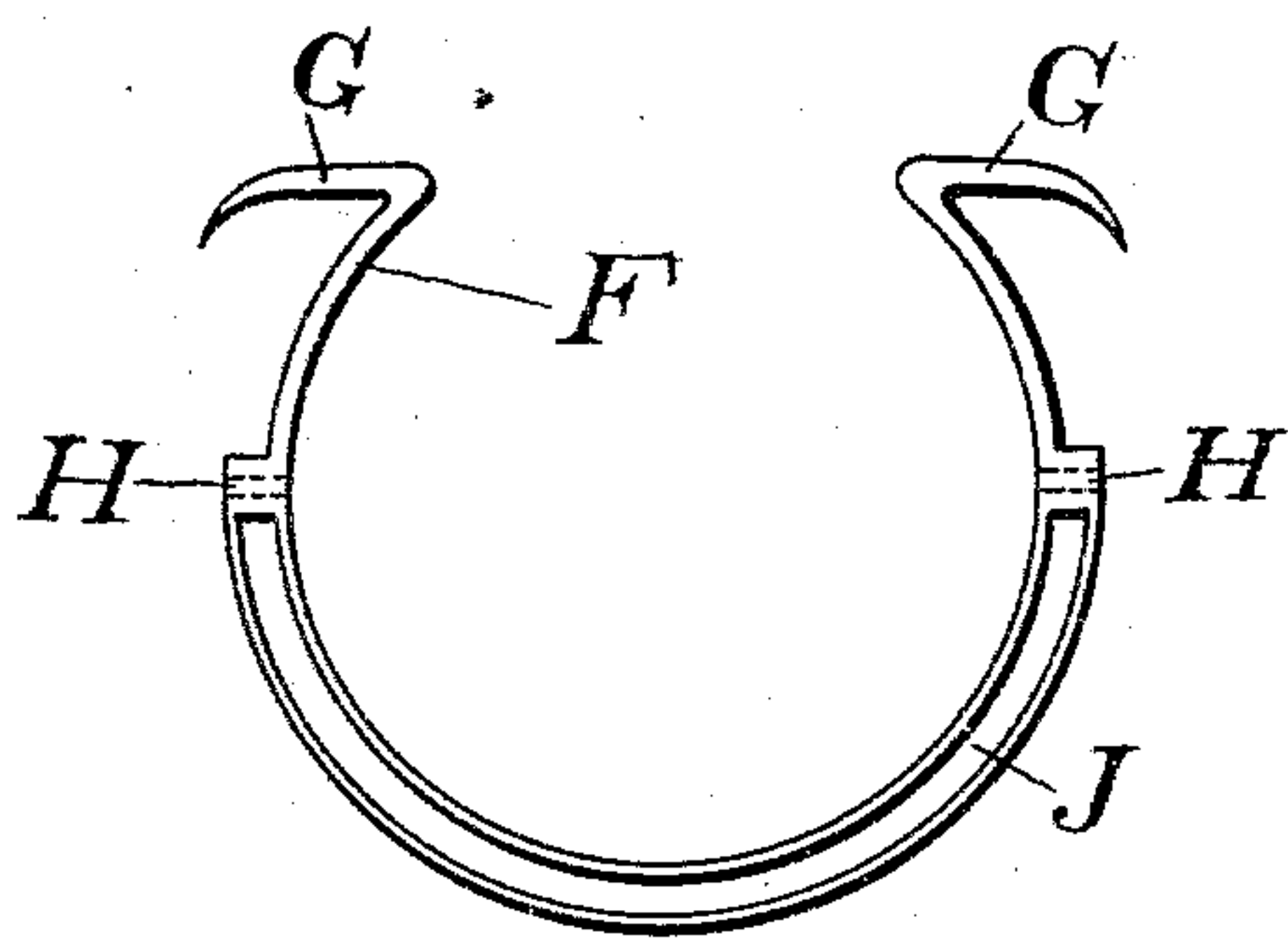


Fig. 3.

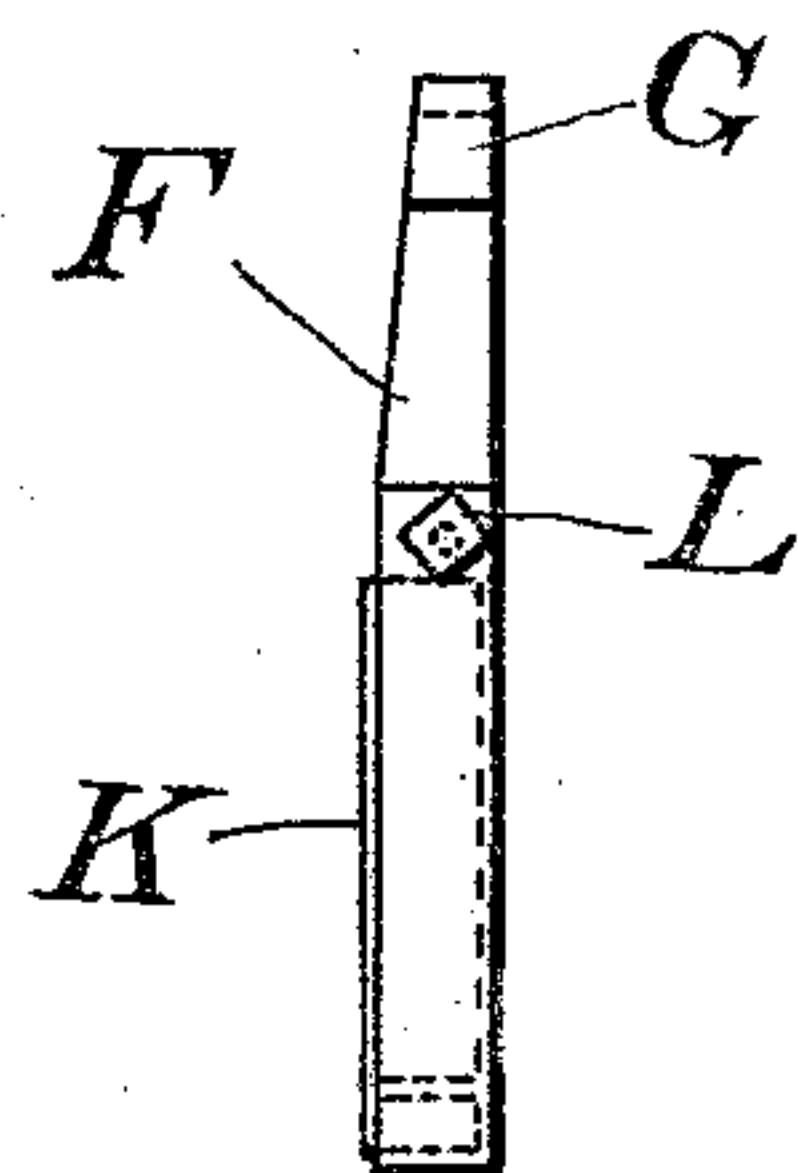


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN W. MOORE, OF LANSINGBURG, NEW YORK.

VALVE-SEAT CLEANER.

SPECIFICATION forming part of Letters Patent No. 556,895, dated March 24, 1896.

Application filed August 9, 1895. Serial No. 558,720. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. MOORE, a citizen of the United States, residing at Lansingburg, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Valve-Seat Cleaners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

15 This invention relates to devices for cleaning valve-seats.

It is intended to be applied to that class of mechanisms known as "sliding-gate" valves.

20 The object of my invention is to provide an attachment for sliding gates which precedes the gate in closing the valve and clears the seat of all accumulated obstructions, insuring the absolute closure of the passage through the valve.

25 My invention consists essentially of a pivoted bow-frame bearing a similarly-curved scraper of soft metal adapted to brush the valve-seat and constructed in detail as hereinafter fully described.

30 In the accompanying drawings, wherein like letters refer to like parts throughout, Figure 1 represents a vertical mid-section view upon a plane parallel to the valve-seats, the gates provided with my invention being raised; Fig. 2, a view, partly in section, upon a vertical plane at right angles with that of Fig. 1, showing the gates closed; Fig. 3, a plan view of my invention detached, the scraper being omitted; and Fig. 4, a side view of Fig. 3 with the scraper included.

40 Referring to Figs. 1 and 2, A represents the outer casing possessing suitable orifices and coupling devices; B, the sliding gate; C, the valve-seat, and D, the main operating-screw, threaded within and through the cross-head E, whereby the gates are raised and lowered in the usual manner.

50 Referring to Fig. 3, F represents the frame of my invention provided at the top with hooks G, so situated as to catch and carry downward with the closing gate collections of twigs

and other foreign bodies lodging in the upper hollow of the casing. (See also Fig. 1.)

It will be observed that the extensions of the frame, which terminate in the hooks, incline toward each other, and the side view of the parts, Fig. 4, shows that the thickness of these extensions is gradually lessened toward the hooks, thereby avoiding contact with the rim of the valve-seat and permitting the scraper to adapt itself closely to the seat.

The letters H H represent two apertures for the passage of the machine-screws L L, which perform the double office of attaching the scraper to the gate B and affording pivots upon which the frame swings in operation. The lower portion of the frame F is provided with a curving recess or slot J, and fitting tightly within the recess is the soft-metal scraper K.

70 It will be noticed, Fig. 4, that the body of the scraper projects beyond the surface of the frame, which position brings the soft metal against the valve-seat.

The unavoidable wear of the working parts of the valve, so far as relates to my invention, is almost entirely confined to the soft-metal scraper, which may readily be removed and renewed.

L L mark the machine-screw pivots already described.

The operation is as follows: The invention being properly attached, as shown in Fig. 1, let the gate be lowered. During the movement now in progress the scraper K is held against the valve-seat by the reaction of the springs M, one end of each being attached to the surface of the adjacent valve-gate, as shown in Fig. 2, while the opposite extremity of each spring exerts a pressure upon the frame F at or near its lowest point. When the valve has been completely closed, the spring M will advance the frame slightly beyond the face of the gate and under and about the lower part of the projecting rim bearing the valve-seat. The ordinary exterior formation of such rims is shown in Fig. 2, and upon raising the gate the frame slips easily from the inclined surface of the rim. Should the gate be raised high enough to bring the lower edge of the frame above the topmost edge of the seat, no hindrance to the return of the

parts would be encountered, an opposite incline of the rim being met with.

I do not limit my construction to the precise form of the frame and scraper shown.

5 Any suitable non-abrading material may be formed into and used as the scraper, and the hooks may be omitted or constructed in a modified or divided form, pointing in different directions, without departing from the pur-
10 view of my invention.

Having thus fully described the construction and operation of my newly-invented valve-seat cleaner, what I claim, and desire to protect by Letters Patent, is—

15 1. A device for cleaning valve-seats, consisting of a frame adapted to be pivotally connected to a valve-gate, a non-abrading scraper borne by said frame, and attachments for maintaining pressure between the said
20 scraper and the seat of the valve, substantially as and for the purposes shown and described.

2. A device for cleaning valve-seats, consisting of a frame adapted to be pivotally connected to a valve-gate, a non-abrading 25 scraper borne by said frame, attachments for maintaining pressure between the said scraper and the seat of the valve, and extensions of said frame provided with hooks, substantially as and for the purposes shown and 30 described.

3. The combination in a device for cleaning valve-seats, of the gate, B, frame, F, pivotally attached to said gate and provided with hooks, G, and recess, J, the scraper, K, and 35 springs, M, arranged substantially as and for the purposes shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. MOORE.

Witnesses:

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