

(No Model.)

2 Sheets—Sheet 1.

C. A. SULZMAN.
HYDRANT VALVE.

No. 591,023.

Patented Oct. 5, 1897.

Fig. 3

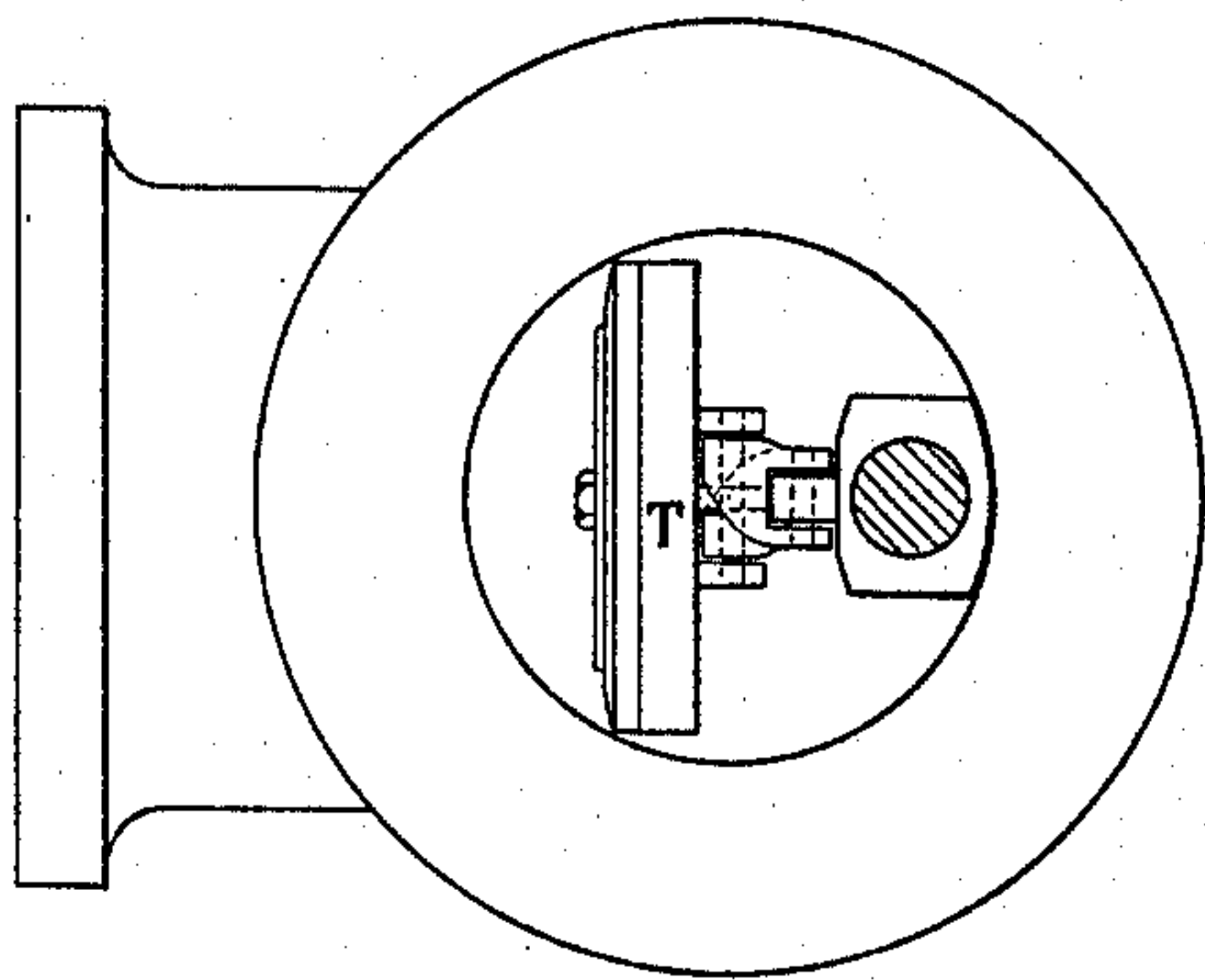


Fig. 2

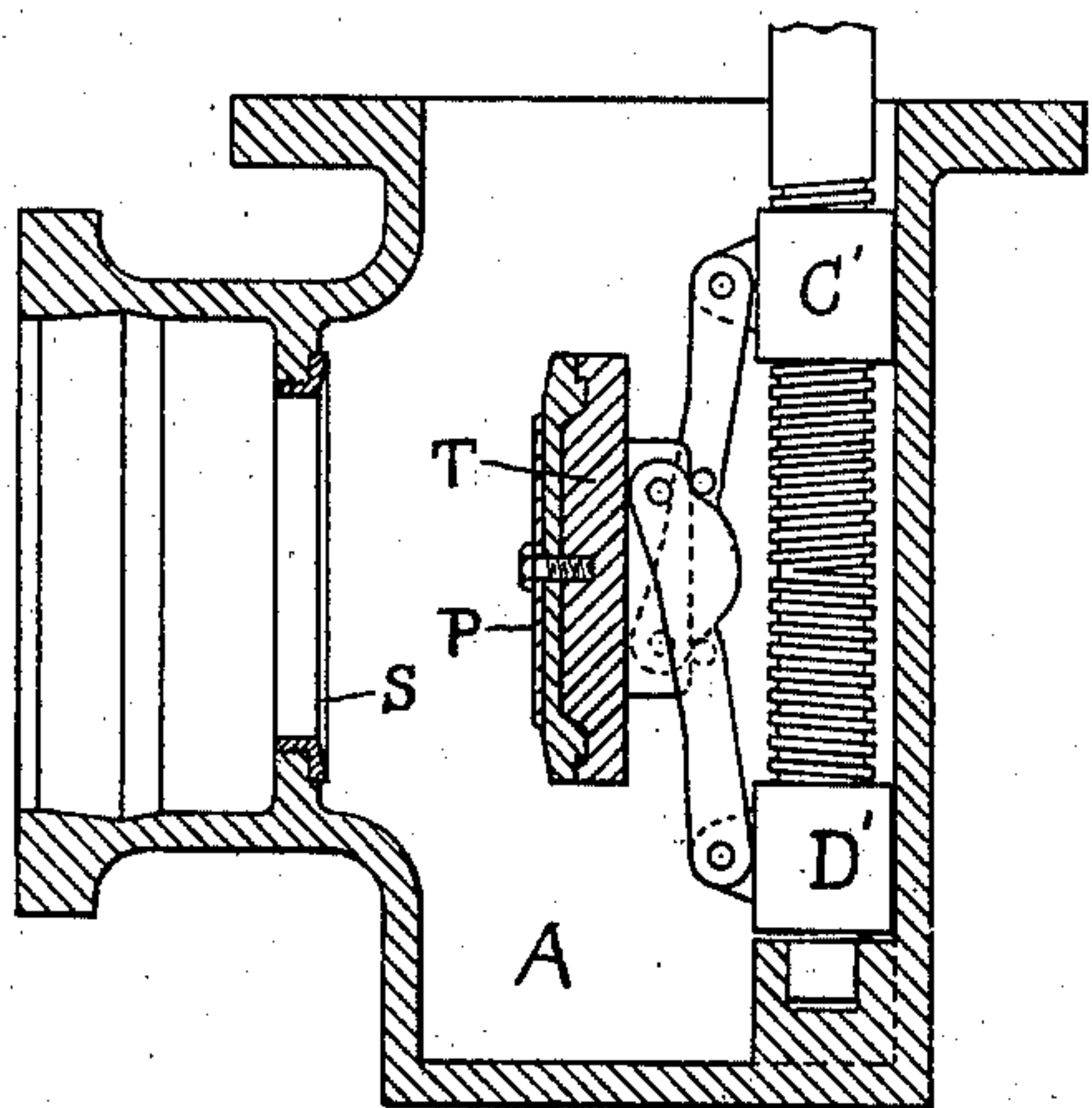
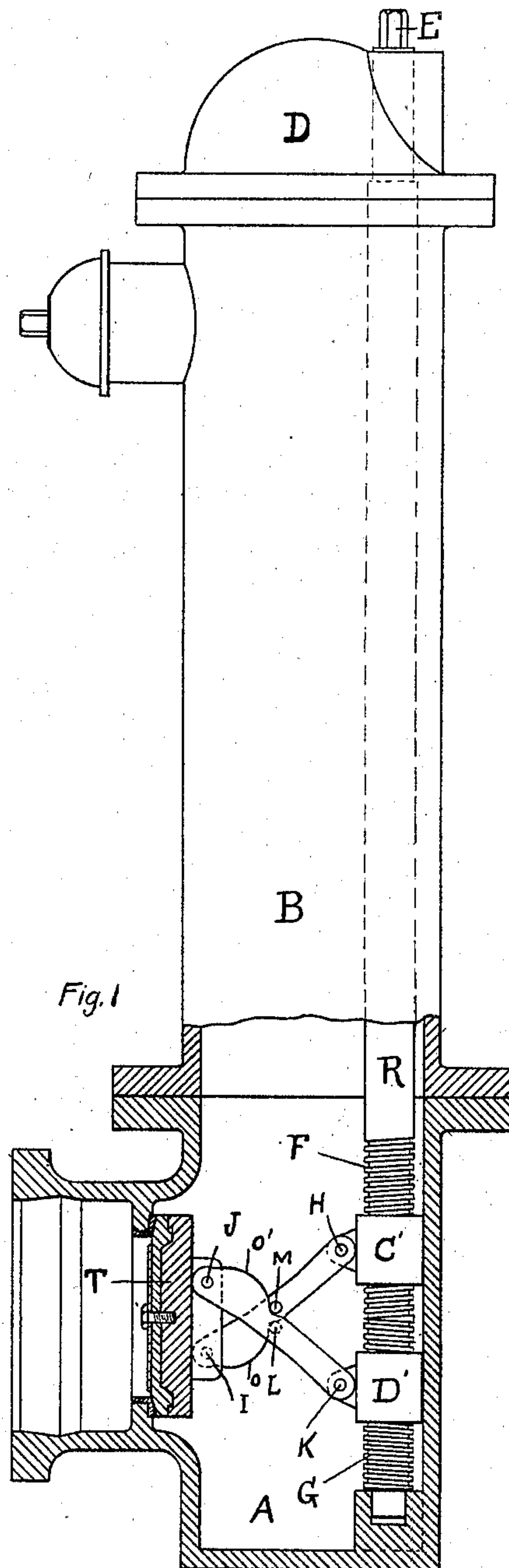


Fig. 1



WITNESSES:

McDouglas.
John Higgins

INVENTOR.

Charles A. Sulzman.

(No Model.)

2 Sheets—Sheet 2.

C. A. SULZMAN.
HYDRANT VALVE.

No. 591,023.

Patented Oct. 5, 1897.

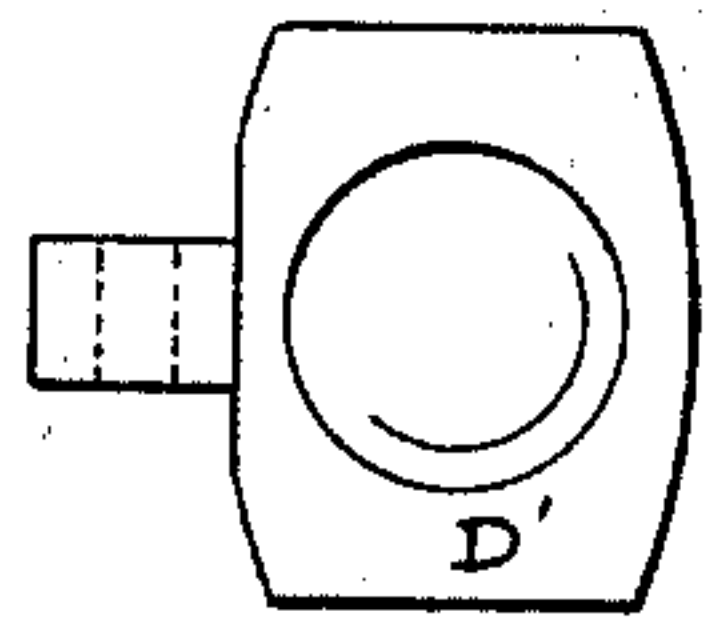


Fig. 7

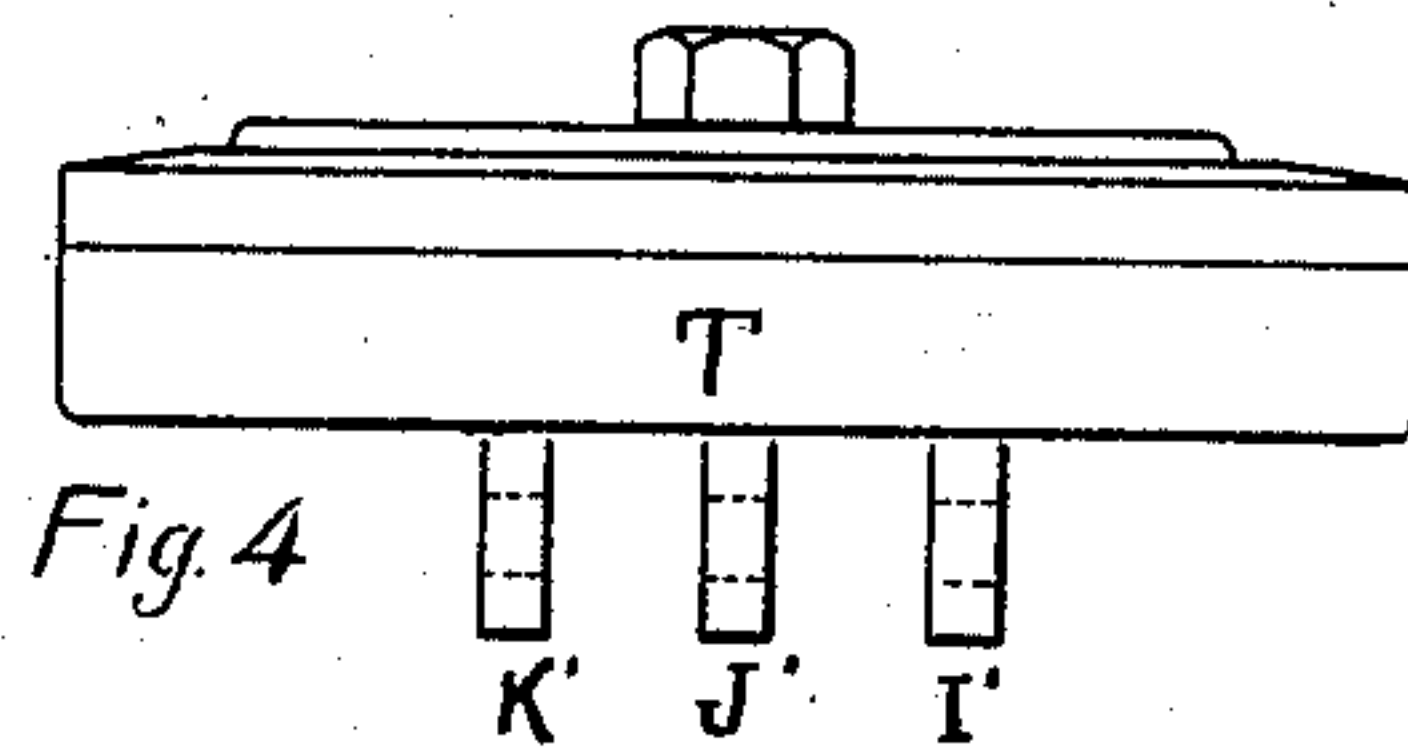


Fig. 4

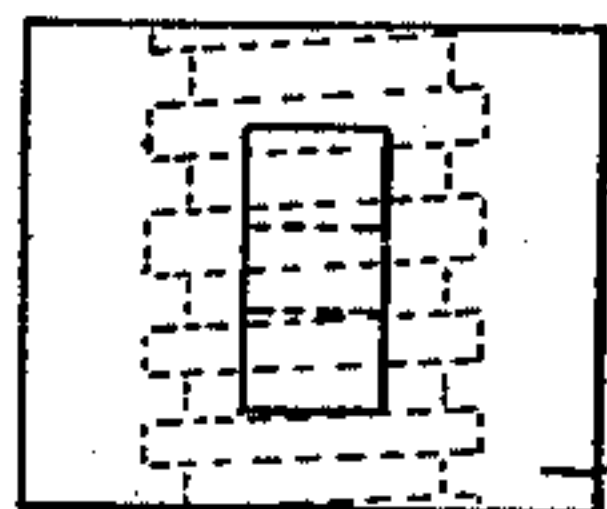


Fig. 9

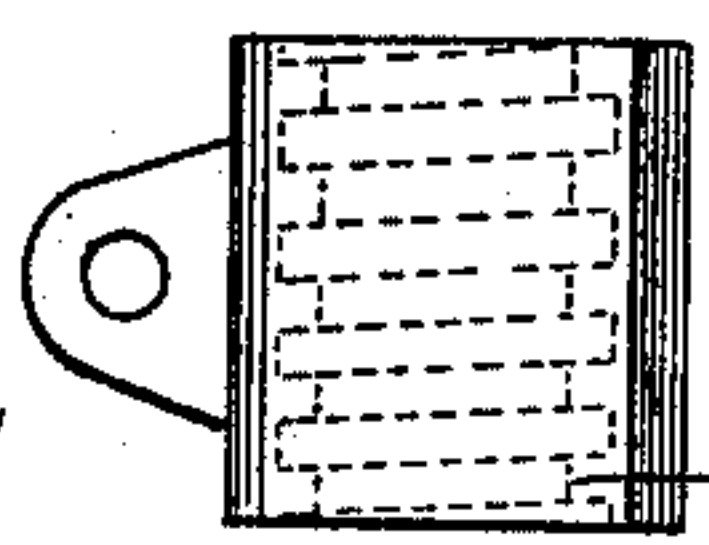


Fig. 8

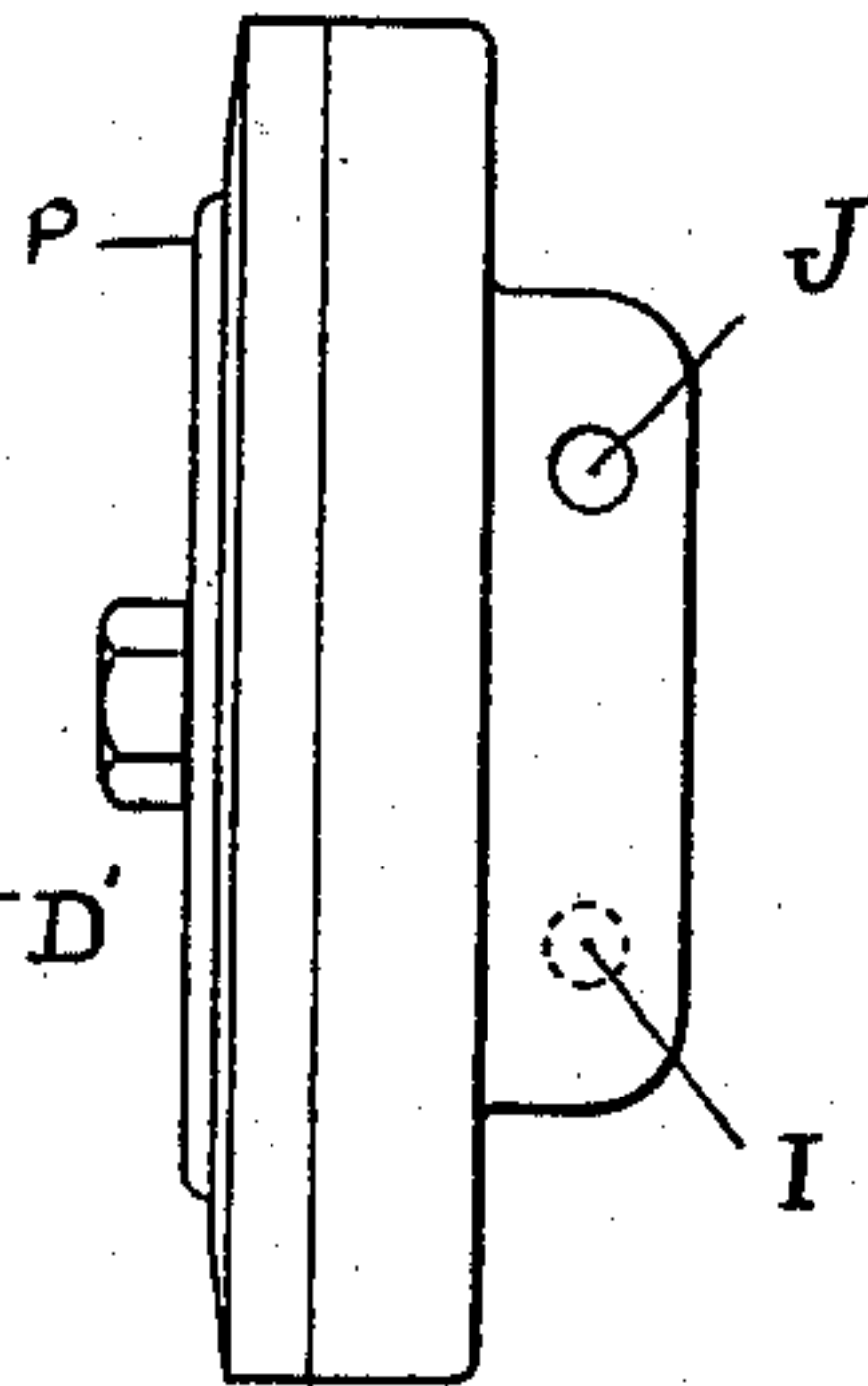


Fig. 6

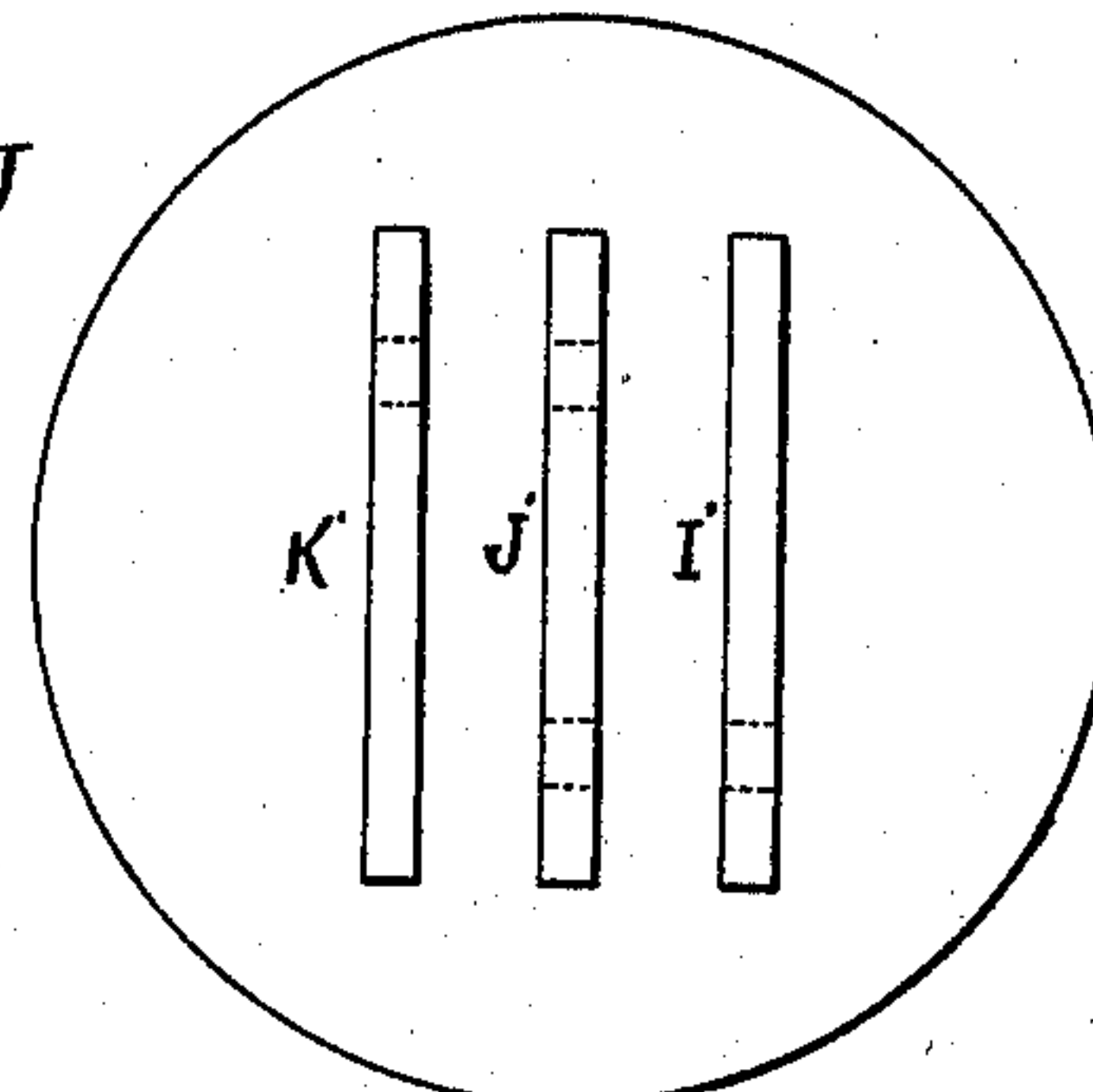


Fig. 5

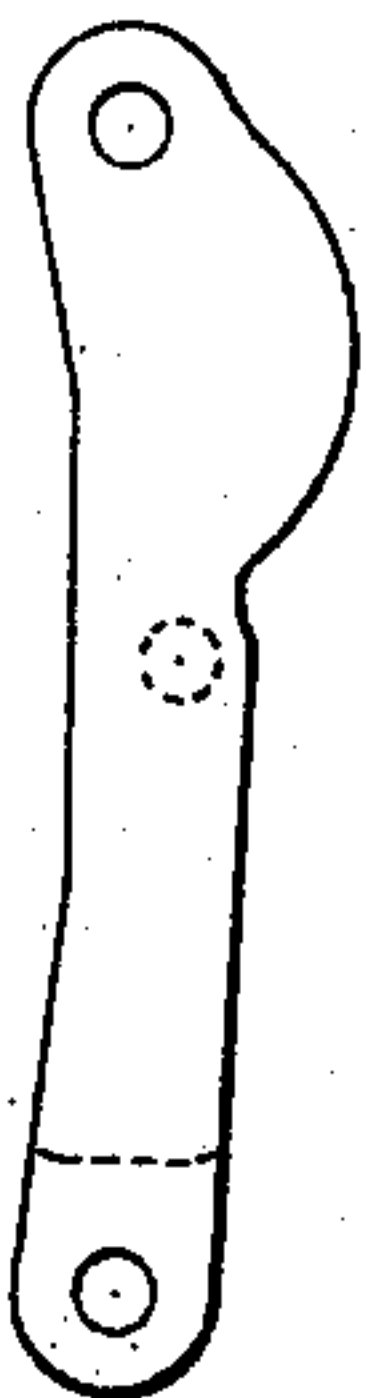


Fig. 11

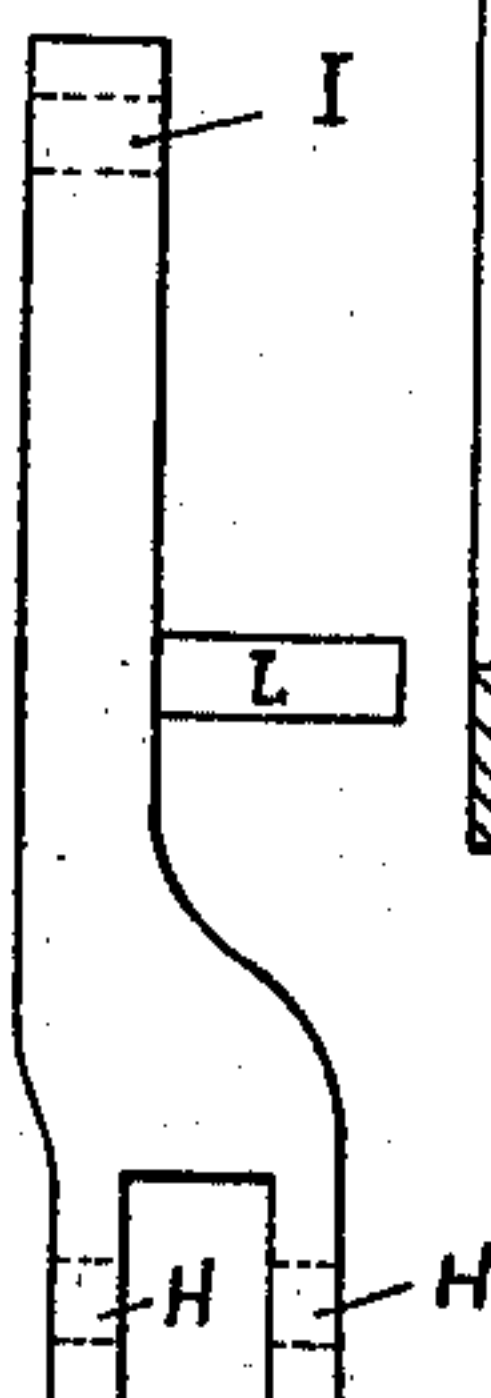


Fig. 10

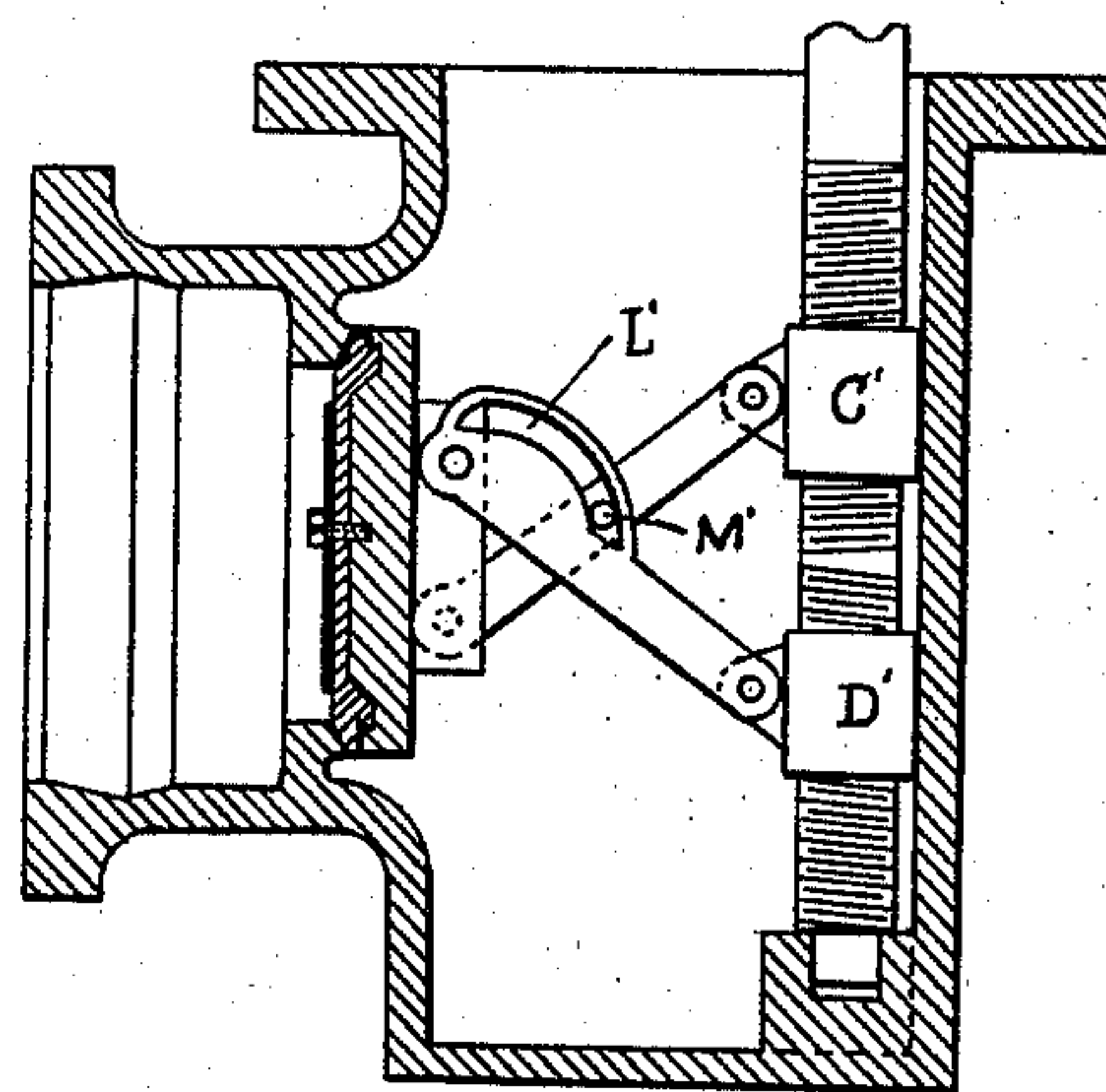


Fig. 12

WITNESSES:

McDouglas.
John Higgins

INVENTOR.

Charles A. Sulzman.

UNITED STATES PATENT OFFICE.

CHARLES A. SULZMAN, OF WATERFORD, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN KNICKERBACKER, OF TROY, NEW YORK.

HYDRANT-VALVE.

SPECIFICATION forming part of Letters Patent No. 591,023, dated October 5, 1897.

Application filed March 4, 1896. Serial No. 581,818. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. SULZMAN, a citizen of the United States, residing at Waterford, in the county of Saratoga and State of New York, have invented a new and useful Improvement in Hydrant-Valves, of which the following is a specification.

My invention relates to an improvement in a lever-operated valve for fire-hydrants; and the object of it is to construct a lever-operated valve which will at all times work parallel to a desired plane. I attain this object by the method illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the hydrant-bottom, showing the valve closed and the stand-pipe bolted to the hydrant-bottom. Fig. 2 is a section of the hydrant-bottom, showing the valve open. Fig. 3 is a plan of the hydrant-bottom. Fig. 4 is a top view of the gate. Fig. 5 is a back view of the gate. Fig. 6 is a vertical view of the gate. Fig. 7 is a top view of one of the nuts. Fig. 8 is a side view of one of the nuts. Fig. 9 is a front view of one of the nuts. Fig. 10 is a top view of one of the levers. Fig. 11 is a top view of the other lever. Fig. 12 is a section of the hydrant-bottom, showing the valve closed and a modification of the device whereby one pin instead of two pins is used to keep the face of the valve in the desired plane.

Similar letters refer to similar parts throughout the several views.

The casing or bottom A for the valve is of suitable form to receive the operating mechanism of the valve and the valve. It is of sufficient size to permit of the valve, the stem, and the operating mechanism of the valve being removed through the top of it and out of the stand-pipe, which has as great a diameter as the upper part of the bottom. The stand-pipe B is bolted to the bottom. On the operating-stem R, which projects through the outside of the cover D, is placed the nut E, which can be readily turned, by means of a suitable wrench, to operate the hydrant-stem R. The lower end of the hydrant-stem R is screw-threaded, with a right and left hand thread F and G, or it is arranged as a support for the lever-end supports to be hereinafter de-

scribed. On the lower part of the stem is placed the nuts or lever-end supports C' and D', which can be moved up and down on the stem. To the nuts or lever-end supports C' and D' are attached the lever-arms H I and J K. These levers are pivoted to the back of the valve at the points I and J and attached to the face of the nuts at the points H and K, so that when the nuts or lever-end supports are moved toward each other the levers H I and J K force the valve T in the direction of its seat S or draw the valve in the opposite direction when the lever-end supports are drawn apart. The back of the valve is arranged with the ribs K' J' I', through which pass the pin-holes J I. On the levers H I and J K are the pins M and L. The pin or projection M comes in contact with the corresponding rounded portions O' of the levers H I and the pin or projection L with the corresponding rounded portion O of the lever J K. When the valve T is drawn to or from its seat S in whatever position it may be, these pins M and L are always in contact with the rounded surfaces O' and O, thus preventing any rocking motion of the valve and always holding the face P parallel to a given plane. I find that the same object is attained by placing a pin on one of the levers and putting on the other lever a curved slot to receive this pin, as shown in Fig. 12. The pin M', moving in this slot L', prevents the face of the valve from not moving parallel to the plane in which it should travel. This modification can be used where only one pin is desired. I do not wish to limit myself to the nuts or lever-end supports being drawn together or apart by right and left hand screws, as any other method of actuating them can be employed other than to have the stem threaded, as hereinbefore stated.

The method described by me does not require more than two levers to give the valve the desired motion and to keep it in the proper position, thus simplifying the construction heretofore used where two sets of parallel levers are employed to keep the valve at all times parallel to a given plane.

I find that unless the levers are made to cross each other that the pins and rounded surfaces

will not act to keep the valve-face in the proper plane—*i. e.*, parallel to the seating-surface for the valve-face. The levers must also be attached at their ends to the back of the valve
5 and to the lever-end supports, as shown.

I do not wish to claim, broadly, in a hydrant-valve levers crossing each other and having mechanism for keeping the valve parallel to the desired plane; but

10 What I do claim is—

1. In a hydrant-valve the combination of the casing, support and actuator for the lever-end supports, lever-end support, a valve to close the opening of the casing, levers cross-
15 ing each other, and having interengaging guiding mechanism on the levers for keeping

the valve parallel to the desired plane, as described.

2. In a hydrant-valve the combination of the casing, support and actuator for the le- 20
ver-end supports, lever-end supports, levers attached to said lever-end supports and to the valve; a valve to close the opening in the valve-casing, pins on the levers arranged so
as to come in contact with corresponding 25
rounded surfaces on the levers to keep the valve in position, substantially as described.

CHARLES A. SULZMAN.

Witnesses:

JOHN HIGGINS,
S. N. DOUGLAS.