No. 719,447. PATENTED FEB. 3, 1903.

O. J. FABIAN.

HIGH PRESSURE BALL COCK.

APPLICATION FILED MAY 17, 1902.

NO MODEL.

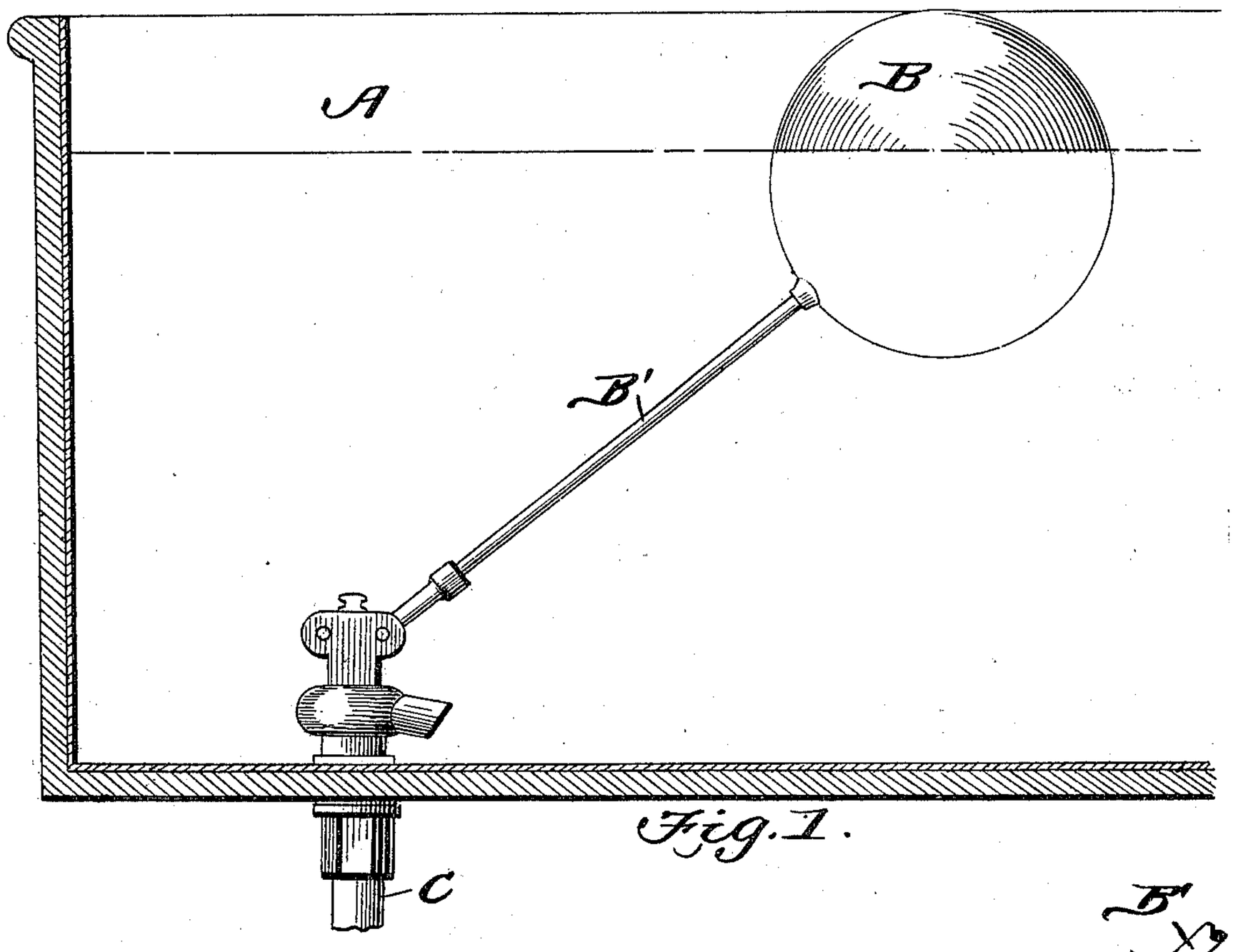

Fig. 1.

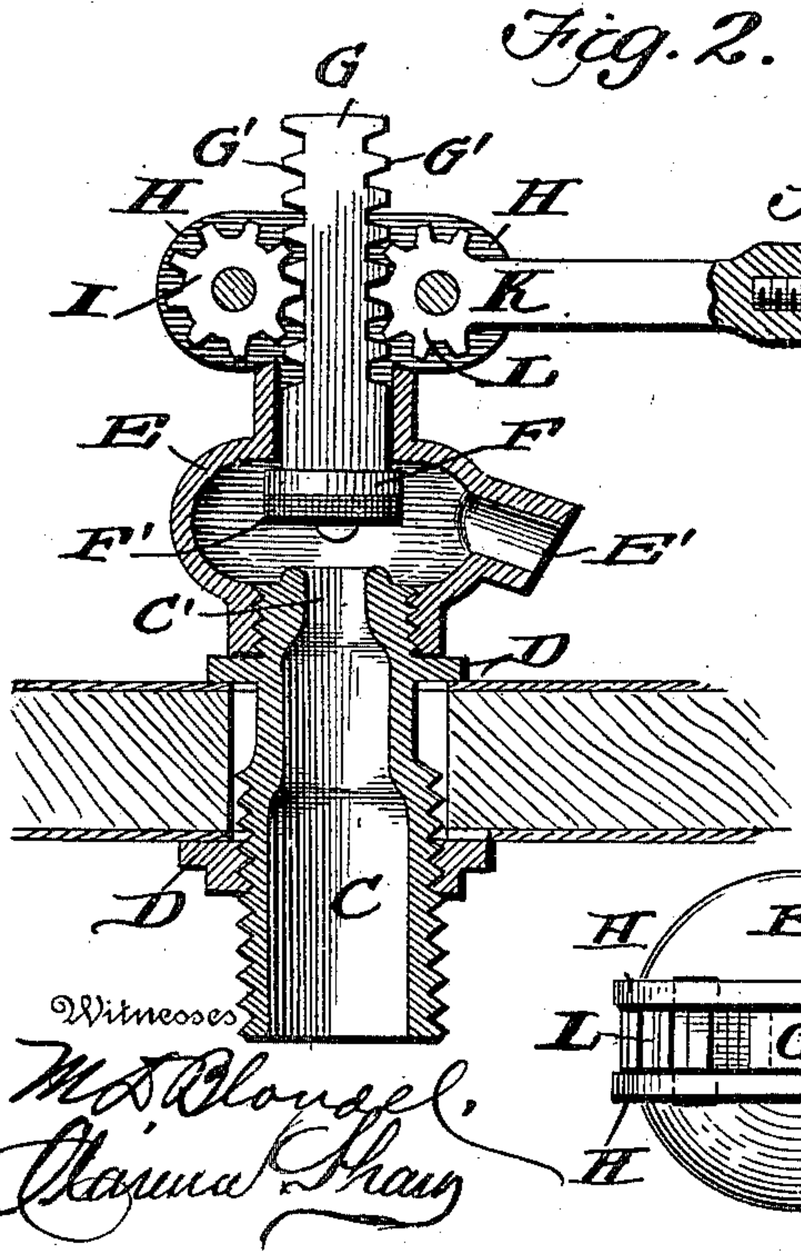

Fig. 2.

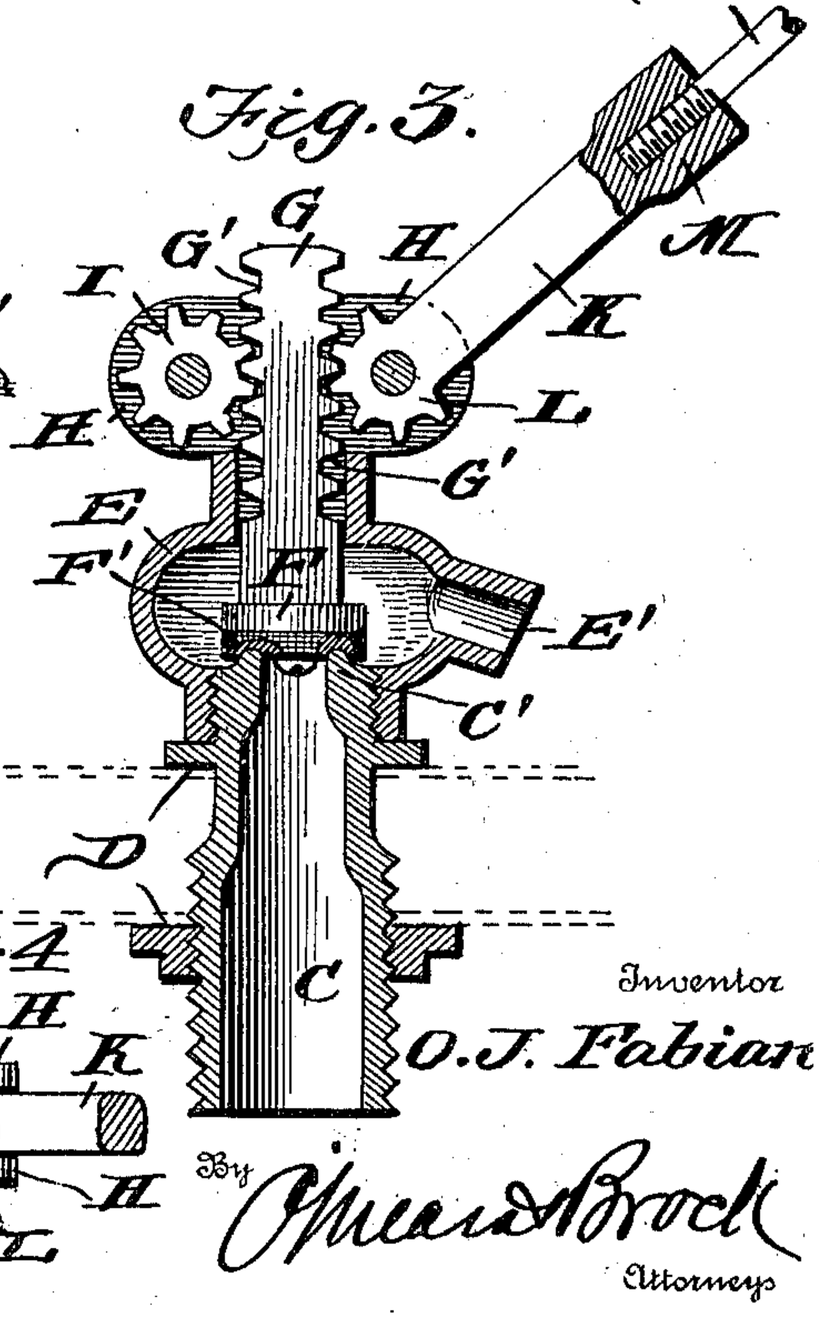

Fig. 3.

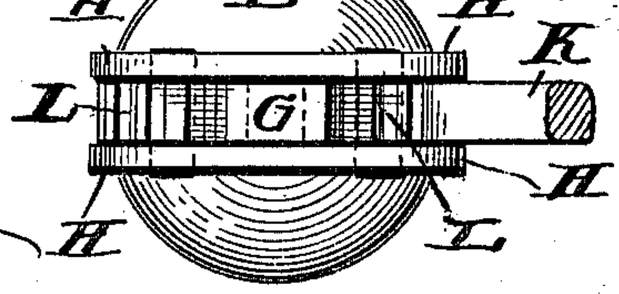

Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

OSCAR JULIUS FABIAN, OF PHILADELPHIA, PENNSYLVANIA.

HIGH-PRESSURE BALL-COCK.

SPECIFICATION forming part of Letters Patent No. 719,447, dated February 3, 1903.

Application filed May 17, 1902. Serial No. 107,806. (No model.)

To all whom it may concern:

Be it known that I, OSCAR JULIUS FABIAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful High-Pressure Ball-Cock, of which the following is a specification.

This invention relates generally to float-valves, and more particularly to one particularly adapted for use in connection with high pressures.

The object of the invention is to provide a simple and highly-efficient construction of valve-operating means particularly useful in connection with tanks and so constructed that the valve can be operated at any desired point, and another object is to provide a valve-operating means of such construction that the float can be arranged upon either side.

With these objects in view the invention consists in the novel features of construction and combination, all of which will be fully described hereinafter and pointed out in the claim.

In the drawings forming a part of this specification, Figure 1 is a view showing a valve constructed in accordance with my invention. Fig. 2 is a sectional view showing the valve open. Fig. 3 is a sectional view showing the valve closed, and Fig. 4 is a detail top plan view.

Inasmuch as my invention is particularly useful in connection with tanks, I have shown an ordinary water-tank A and likewise an ordinary float B, having an arm B′ connected thereto.

C indicates the water-supply pipe, which projects up through the bottom of the tank, is slightly contracted at its upper end, and terminates in a valve-seat C′. Suitable packing collars and gaskets D are employed for effecting a tight joint between the pipe and tank. The valve-casing E is secured upon the top of the pipe C and is provided with a discharge-outlet E′.

F indicates the valve, having a stem G, which projects up through the top of the case, said valve being preferably provided with a rubber face F′, which is adapted to seat firmly upon the seat C′. The valve-stem G is preferably rectangular in cross-section and has its opposite face provided with rack-teeth G′. The valve-casing is provided with parallel ears H, and between one set of ears is journaled a pinion I, which meshes with the rack-teeth G′, adjacent thereto, and between the other pair of ears is pivoted the arm K, having the pinion L integral with its inner end, the outer end being shaped into a socket M to receive the end of the rod B′.

From the construction herein shown and described it is obvious that as the tank fills with water the float will be raised, and as the float rises it carries with it the rod B′, and the arm K is consequently elevated, and the pinion L, meshing with the rack-teeth of the valve-stem, forces the said valve-stem and valve downwardly and sets the valve firmly upon the seat C′.

When the water escapes from the tank, the float of course drops, and the valve-stem is elevated through the medium of the arm K and pinion L. The pinion I upon the opposite side serves to guide a steady movement of the valve-stem. It is obvious that gears I and L are interchangeable, so that the float can be arranged upon either side of the valve, and, furthermore, the pinion L can be so adjusted with reference to the rack-bar that the valve can be opened and closed at any desired point.

It will thus be seen that I provide an exceedingly simple construction of valve and operating mechanism connected therewith, and it will also be understood that the device is particularly useful in connection with large tanks and also for connection with high-pressure supply-pipes, inasmuch as the gearing parts positively hold the valve either in an open or closed position, and, furthermore, the movement of the float positively operates the valve and its stem through the medium of the gearing devices. It will also be understood that for very large tanks and valves I may employ two levers, one upon each side of the valve-stem, each one carrying a float at its outer end.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination with a supply-pipe terminating in a valve-seat, of a valve-casing arranged upon the upper end of the pipe and

provided with a discharge-outlet, said valve-casing also having a stem-guide and parallel ears, the valve arranged within the casing and having a stem projecting upwardly therefrom, said stem having rack-teeth upon its opposite sides, a pinion pivoted between one pair of ears and engaging the rack-teeth upon one side, an arm having a pinion integral therewith and pivoted between the other pair of ears and engaging the rack-teeth, and the float having its rod connected to the arm, for the purpose specified.

OSCAR JULIUS FABIAN.

Witnesses:
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