

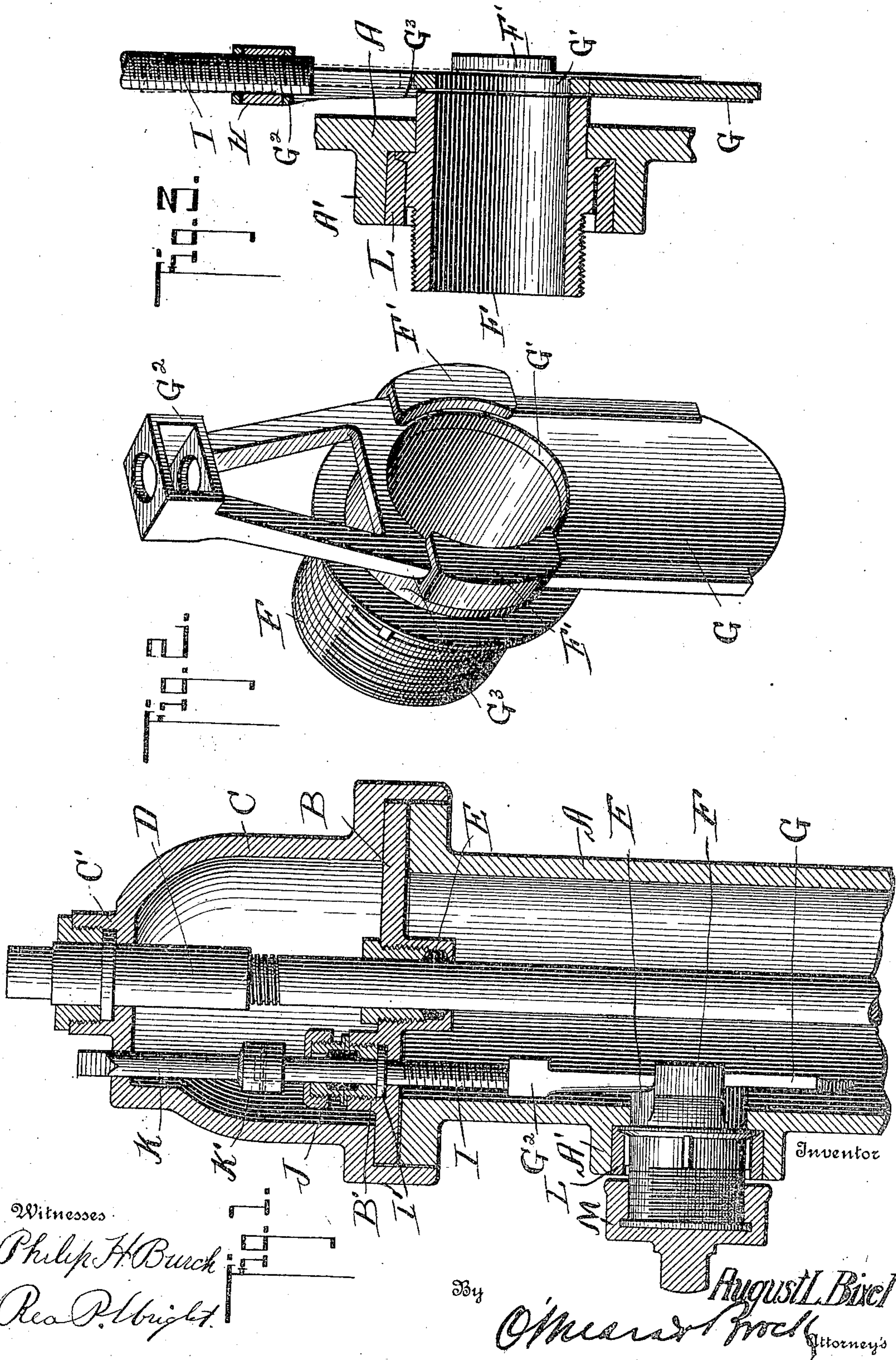
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DISCHARGE NOZZLE AND INDEPENDENT OUT-OFF VALVE FOR FIRE HYDRANTS.

APPLICATION FILED SEPT. 20, 1907.

960,620.

Patented June 7, 1910.





# UNITED STATES PATENT OFFICE.

AUGUST LEONARD BIXEL, OF CLEVELAND, OHIO.

DISCHARGE-NOZZLE AND INDEPENDENT CUT-OFF VALVE FOR FIRE-HYDRANTS.

960,620.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed September 20, 1907. Serial No. 393,860.

*To all whom it may concern:*

Be it known that I, AUGUST LEONARD BIXEL, a citizen of the United States, residing in Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Discharge-  
5 Nozzles and Independent Cut-Off Valves for Fire-Hydrants, of which the following is a specification.

10 The object of my invention is to provide a very novel form of valve which is so constructed, that if anything should break, the valve would drop by its own weight, so as to leave the discharge nozzle open, thereby  
15 overcoming the difficulties now existing with fire hydrants in use as these hydrants become useless if the valve gets out of order in any way.

Another object of my invention is to provide an independent cut off valve which is  
20 exceedingly simple and cheap in construction, and one which is very easily operated and composed of a very few parts which are so arranged that they are not apt to  
25 get out of order.

With these objects in view, the invention consists in the novel features of construction, combination and arrangement of parts,  
30 hereinafter fully described and pointed out in claim.

In the drawings forming a part of this specification:—Figure 1 is a vertical section through a fire hydrant showing my improved nozzle and cut off valve in place.  
35 Fig. 2 is a perspective view of the nozzle and valve detached. Fig. 3 is a detail section through the nozzle and valve and a portion of the hydrant casing.

In the drawings A indicates a hydrant casing provided with a flanged upper end, on which is arranged a disk B over which is mounted a cap C, the lower ends of the cap being flanged and fitting down over the flange of the casing and being formed water-  
45 tight by packing material arranged between the disk and casing and casing and cap. The cap C is provided with a threaded boss C' in which is mounted an operating rod D which extends down through a stuffing  
50 box E formed in the disk connected to an ordinary valve, (not shown) arranged in the bottom of the fire hydrant.

A boss A' is formed on one side of the

casing A in which is secured a flanged discharge nozzle F which extends into the casing and is provided with oppositely disposed guide-members F' in which is mounted a valve G having enlarged guide edges substantially square in cross section provided with an opening G' adapted to aline  
60 with the nozzle, and having arms extending upwardly therefrom provided with a housing G<sup>2</sup>, the top and bottom of which are apertured, and mounted in the housing is a nut H, the threaded bore of which is adapted to aline with the apertures of the casing,  
65 through which the threaded lower end of a rod I passes. The rod is provided with a collar I' which is mounted in a boss B' of the disk B, and over which is secured a  
70 stuffing box J.

Secured on the upper end of the rod I is a socket K', of a rod K which extends upwardly out through an opening formed in the top of the cap C, over which a spanner  
75 or wrench is adapted to be placed for operating the valve, and it will be seen that when this rod is turned, the valve will be raised and lowered so as to open and close the nozzle, and if the rod should become  
80 broken by any cause, the valve will drop by its own weight, until the shoulders G<sup>3</sup> formed on the arms of the valves come into contact with the nozzle which supports the valve in an opened position.  
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The nozzle is provided with exterior ribs which are engaged by a packing ring L which is driven into place, and engages the flange of the nozzle and secures the nozzle in the boss of the casing against the pressure  
90 of the water and at the same time forms a water-tight joint. A cap M is arranged over the threaded outer end of the nozzle for preventing anything from being put into the nozzle and clogging the same.  
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From the foregoing description it will be seen that I have provided a nozzle with a sliding valve so constructed that it can be easily and quickly operated, and one which if it should become broken by any  
100 cause would drop so as to leave the nozzle open.

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

A fire hydrant comprising a casing pro-

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vided with a boss in its side, a nozzle secured in the boss having oppositely disposed guide grooves formed on its inner end, a valve having guide edges mounted in said  
5 guide grooves and being provided with an opening adapted to aline with the opening in the nozzle, the valve having also upwardly extending arms which are thicker

than the width of the grooves, and means for connecting said arms and the valve stem. 10

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