

F. L. H. SIMS.
SLUDGE FAUCET FOR CARBID GAS GENERATORS.
APPLICATION FILED JULY 17, 1908.

936,375.

Patented Oct. 12, 1909.
2 SHEETS—SHEET 1.

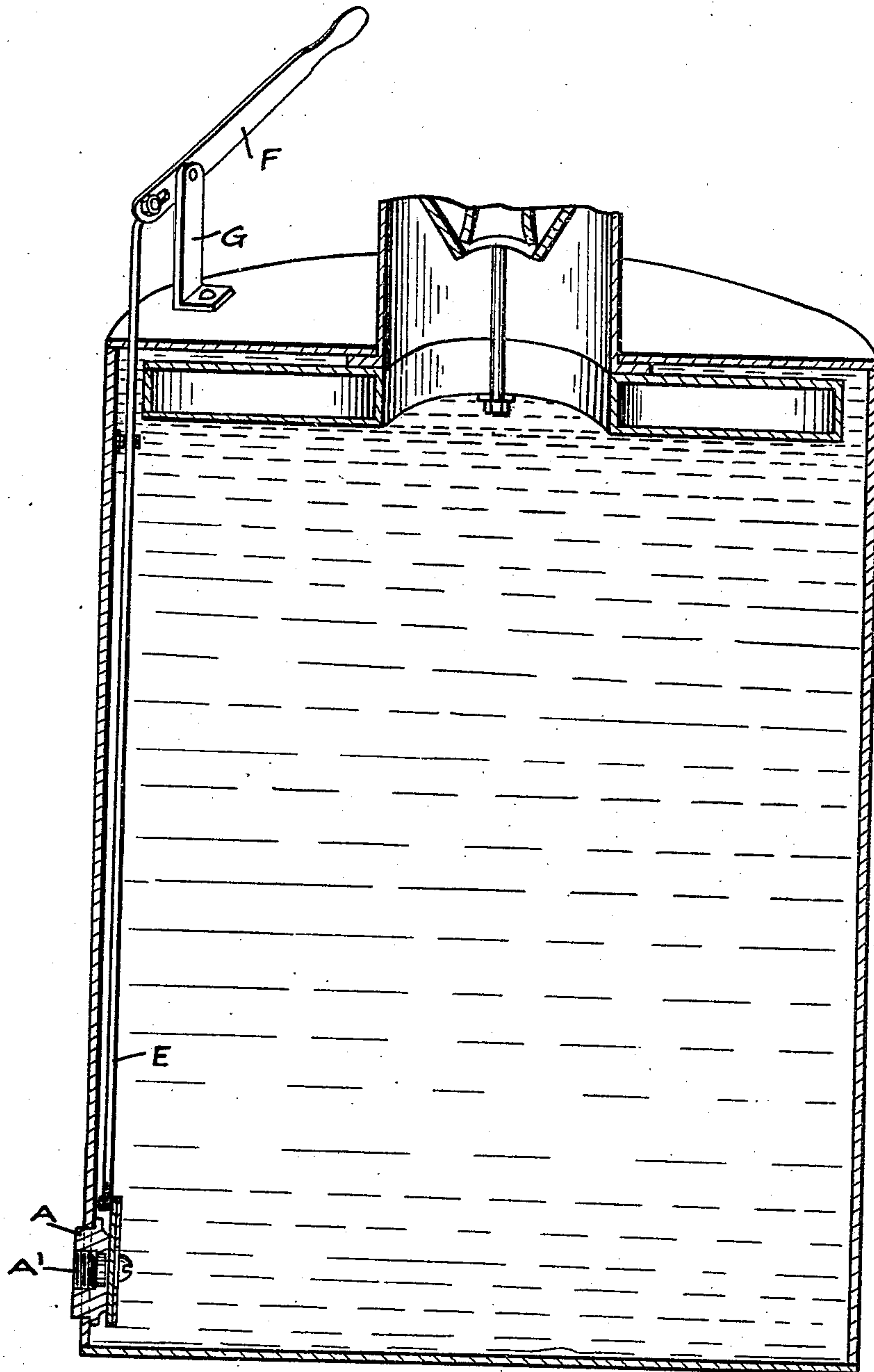


FIG. 1.

WITNESSES

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Att'y's

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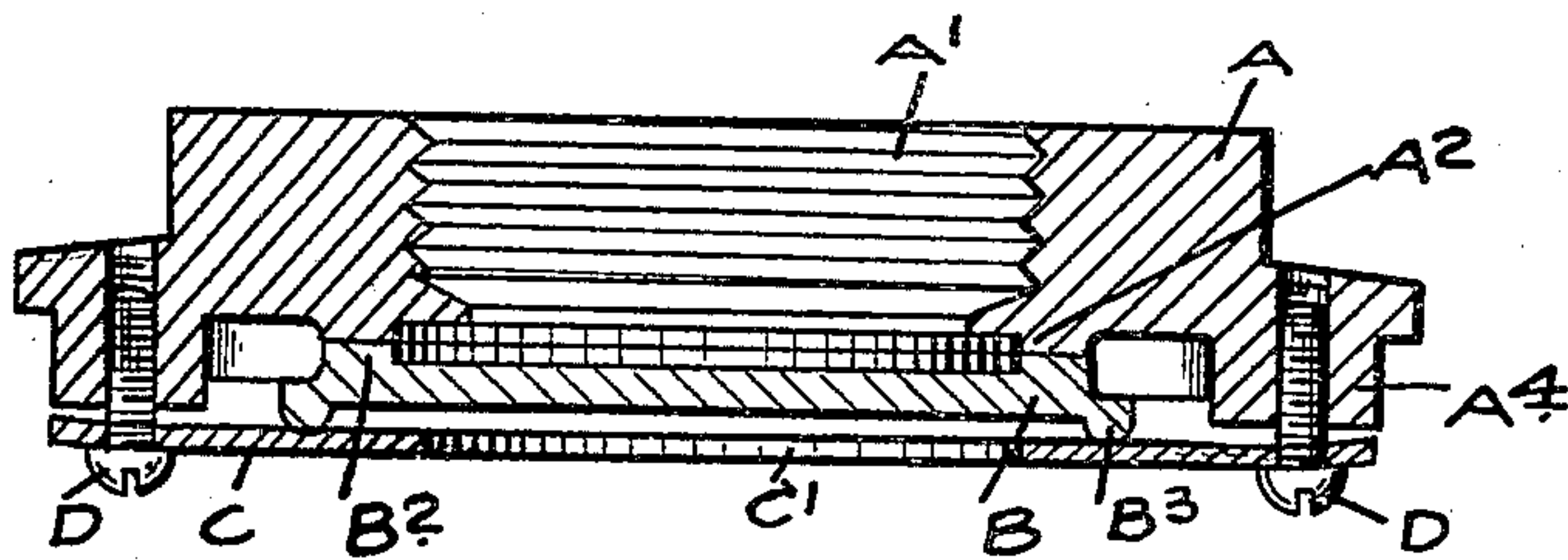


FIG. 3.

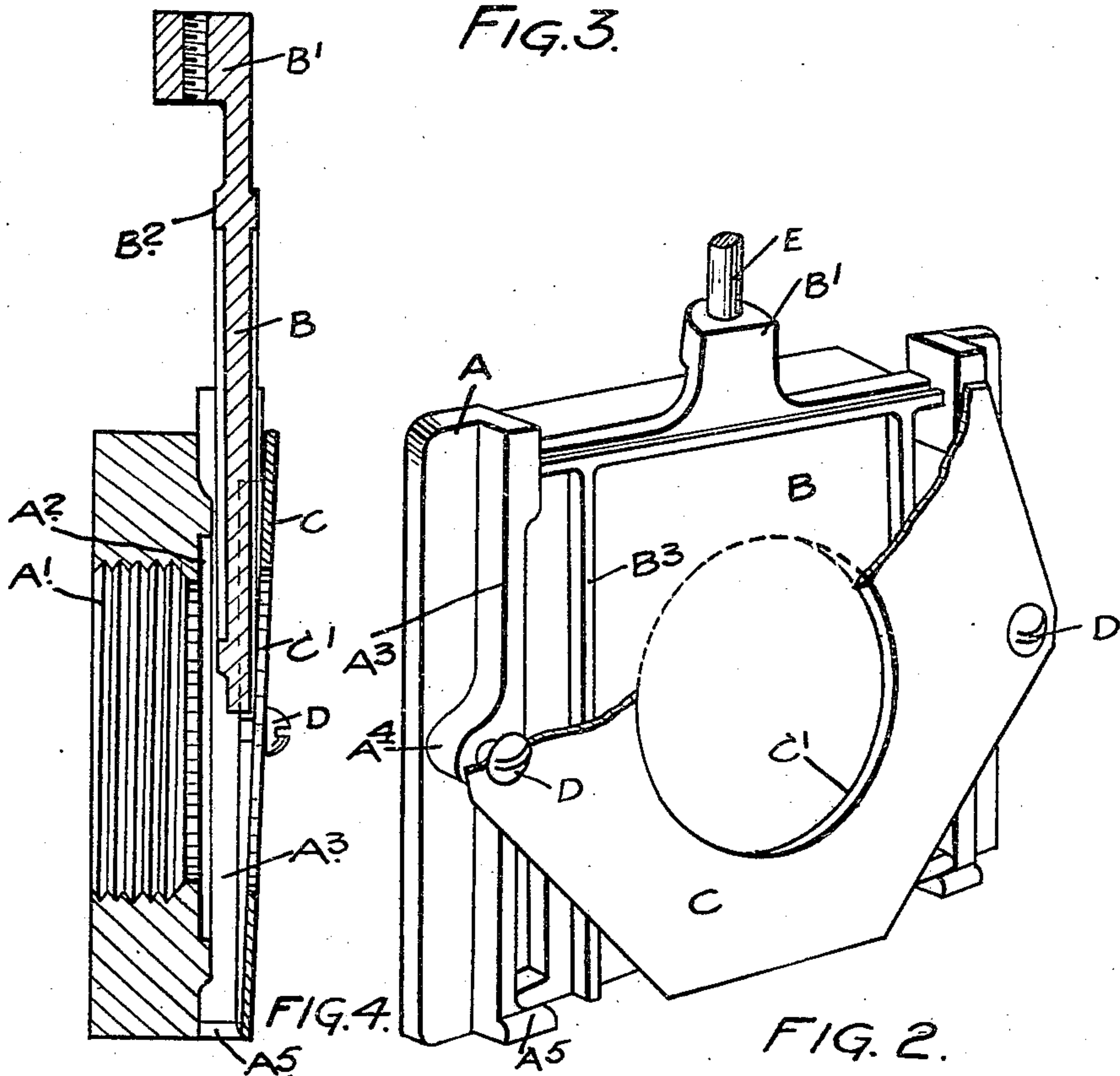


FIG. 2.

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UNITED STATES PATENT OFFICE.

FREDERICK LINDLEY HUNT SIMS, OF TORONTO, ONTARIO, CANADA.

SLUDGE-FAUCET FOR CARBID-GAS GENERATORS.

936,375.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed July 17, 1908. Serial No. 444,099.

To all whom it may concern:

Be it known that I, FREDERICK LINDLEY HUNT SIMS, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Sludge-Faucets Particularly Adapted for Carbid-Gas Generators, of which the following is the specification.

My invention relates to improvements in sludge faucets particularly adapted for carbid gas generators, and the object of the invention is to devise a faucet, which will obviate any difficulty from leaking due to wear and from freezing, which are incident to faucets in which the slide or gate is used on the outside of the faucet.

A further object is to insure the valve seats always being kept clean.

My invention consists of a flanged casting, which is suitably secured in an orifice in the tank and is provided with a threaded orifice adapted to receive the outlet pipe or tubular spout of the faucet, and an inner ground projecting annular rib having a flat face, a closing gate having an operating stem connected thereto and a corresponding co-acting annular flat face and a spring plate adapted to hold the closing gate on its seat when closed, the parts being arranged and constructed in detail as hereinafter more particularly explained.

Figure 1, is a sectional view of the tank of a carbid gas generator showing the location of my improved faucet. Fig. 2, is a perspective view of my sludge faucet. Fig. 3, is a horizontal section. Fig. 4, is a vertical section.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the main casting of my sludge faucet, which is provided with a suitable orifice A^1 to receive the inner end of the outlet pipe or tubular spout of the faucet.

A^2 is an annular rib surrounding the orifice at the inside and preferably provided with a smooth or ground face.

A^3 are guiding ribs formed in the casting A at each side and provided with intermediate bosses A^4 .

B is a gate provided at the top with an off-set boss B^1 and on its front face with an annular rib B^2 , which is ground so that when the gate is in its normal position the annular rib B^2 will lie against the rib A^2 .

A^5 are stops formed at the bottom of the rib A^3 and designed to limit the downward movement of the gate B.

B^3 are ribs formed on the rear face of the gate B.

C is a plate of spring metal having a central opening C^1 corresponding in size to the opening A^1 in the casting A, and held by screws D at each side as indicated, thereby exerting an inward pressure on the ribs B^3 of the gate B.

E is an operating rod having a threaded lower end, which fits into a correspondingly threaded hole in the boss B^1 . The upper end of the rod E is connected to a lever F, which is pivoted on the bracket G secured to the top of the tank. By manipulating the lever F the faucet gate may be raised and lowered. When being raised as soon as the gate B reaches the position shown in Fig. 4, all pressure of the spring plate C is removed therefrom and it lies free and the clear water, which is finally drawn out from the tank after the sludge has been removed will serve to keep the faces of the annular ribs B^2 and A^2 clear and clean. As soon as the lever F is manipulated so as to force down the gate B such gate will upon its passing the pin D be pressed upon by the plate C and more and more so until it reaches the stop A^5 when the maximum pressure of the spring plate C will be exerted upon the ribs B^3 and thereby the faces B^2 and A^2 brought to abut each other so closely indeed that absolutely no liability of any leakage of my sludge faucet is liable.

Heretofore where the closure for the spout was at the outside, the sludge and water entering into the spout or pipe would freeze therein, and consequently the faucet became useless. In my invention, however, it will be seen that as the gate B is located to the inside of the tubular spout or outlet pipe and on the outside of the machine in the water of the generator all liability of freezing is avoided and operation of the faucet at all times is easy. In my invention also there is no liability of the sludge drying upon the faucets as in the old forms of faucets as they are not subject to the action of the air, but are always located in the water.

What I claim as my invention is:

A sludge faucet for carbid gas generators comprising a casting having a central orifice and an annular rib surrounding the same

having a ground inner surface, of a gate
having an annular faced rib corresponding
in diameter and having a ground outer sur-
face, ribs extending vertically on the back
5 of said gate, a flat plate of spring metal pro-
vided with a central orifice and screws lo-
cated one at each end for holding the plate

against the ribs on the gate and disposed
centrally of the height of the plate as and
for the purpose specified.

FREDERICK LINDLEY HUNT SIMS.

Witnesses:

B. BOYD,

A. THOMAS.