

(No Model.)

2 Sheets—Sheet 1.

J. A. COLEMAN.  
SEWER TRAP.

No. 459,440.

Patented Sept. 15, 1891.

FIG. 2.

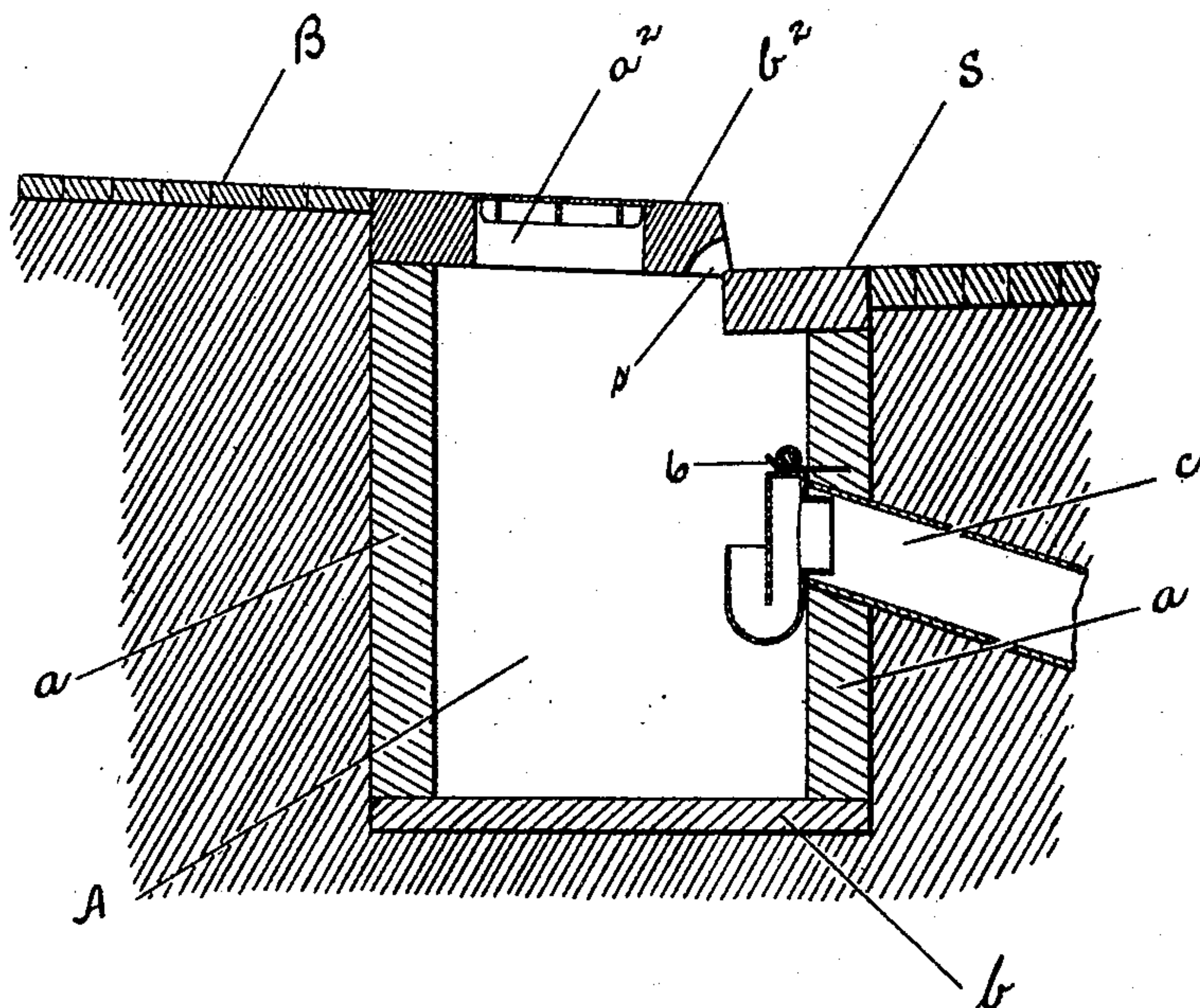
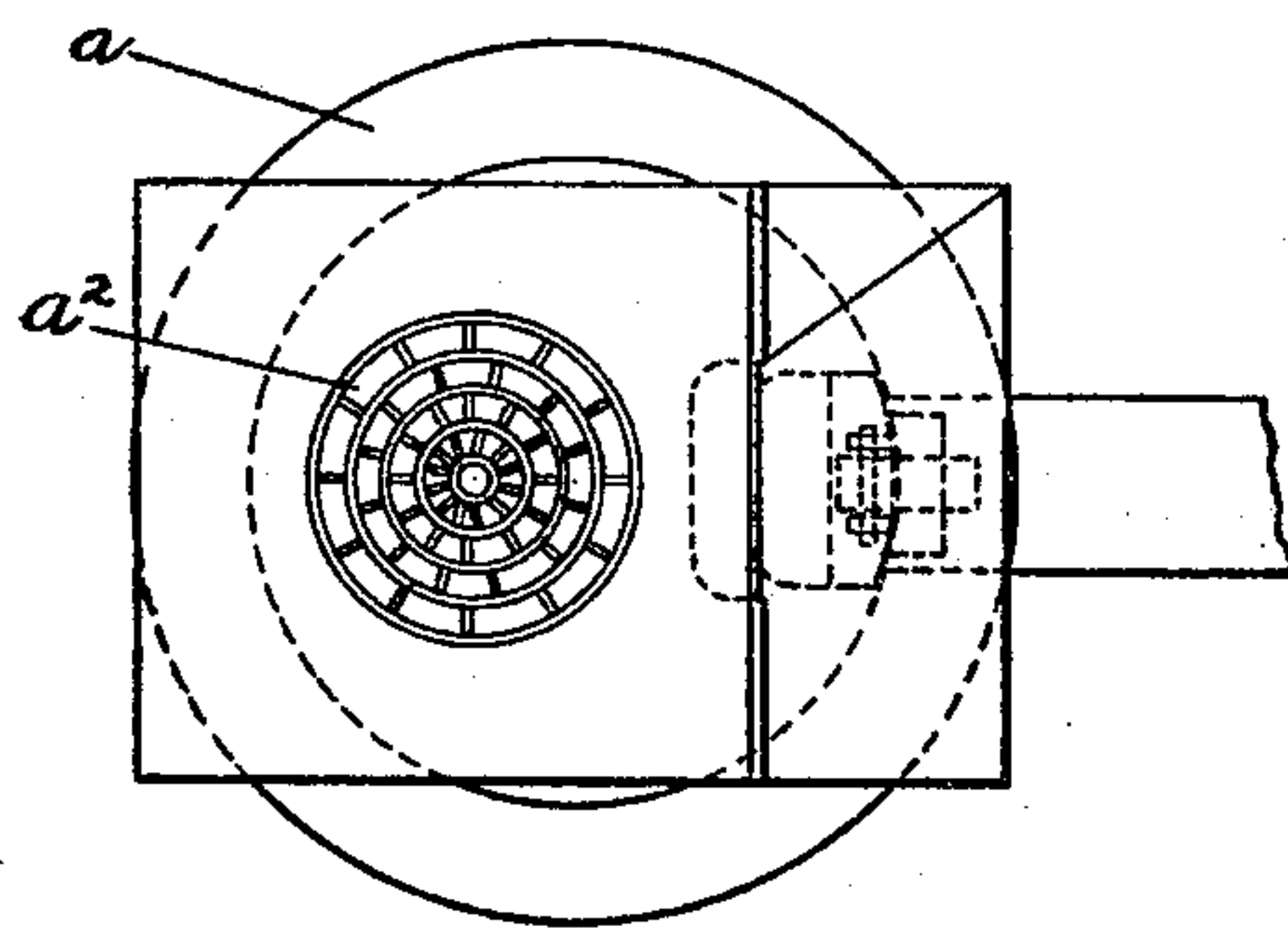


FIG. 1.



WITNESSES.

*O. Lapham*  
*A. E. Lyman.*

INVENTOR.

*John Addison Coleman*



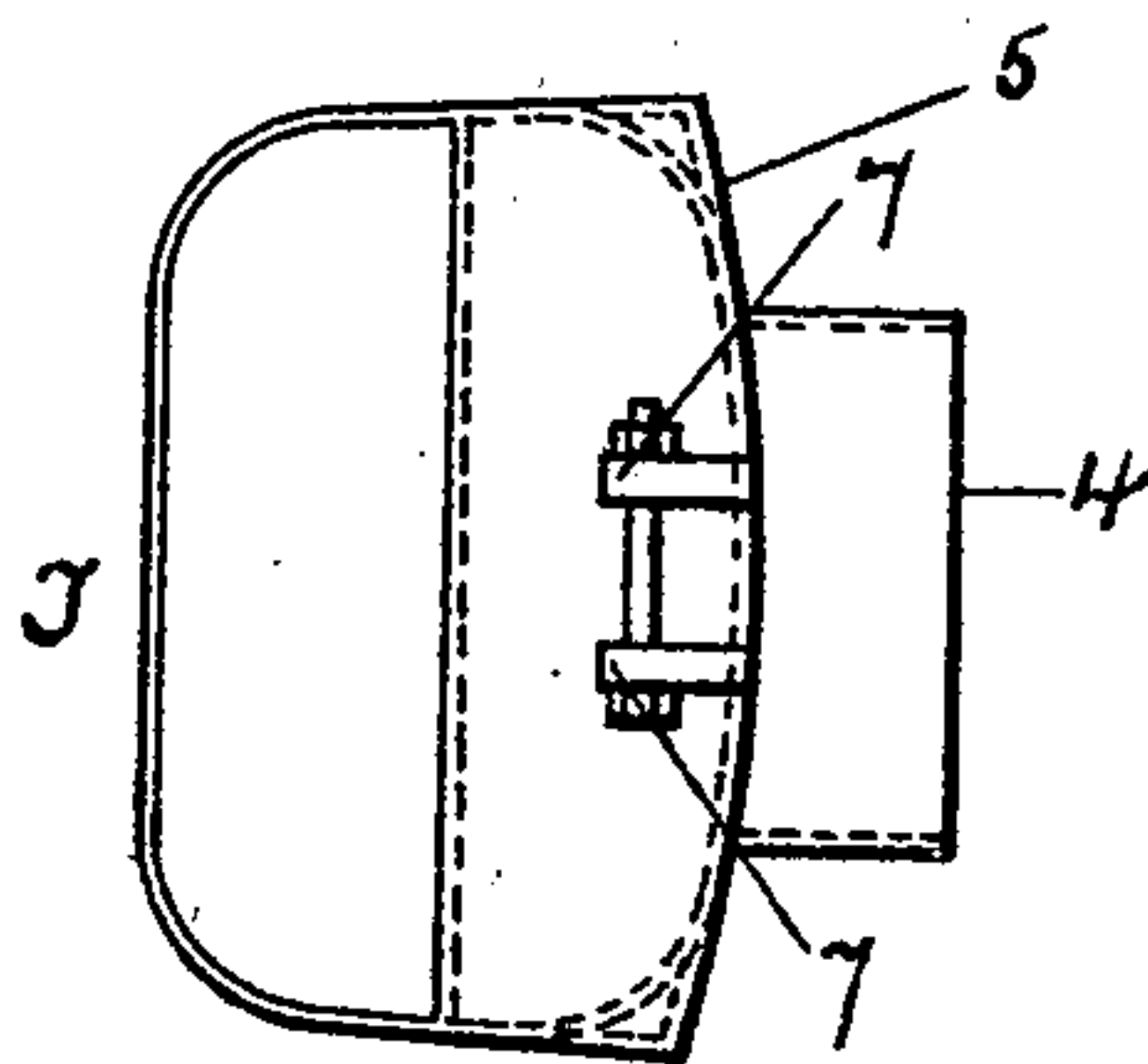
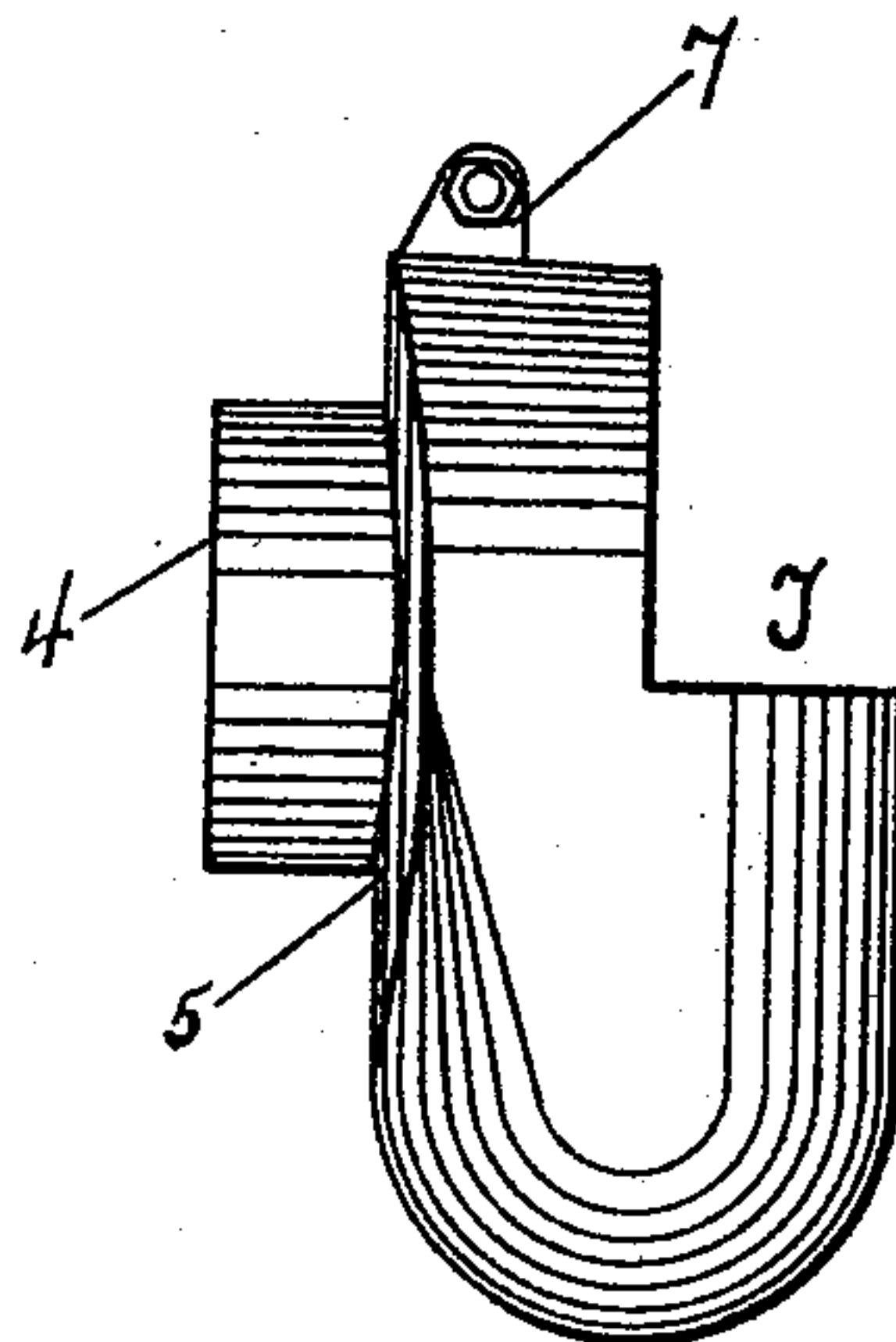
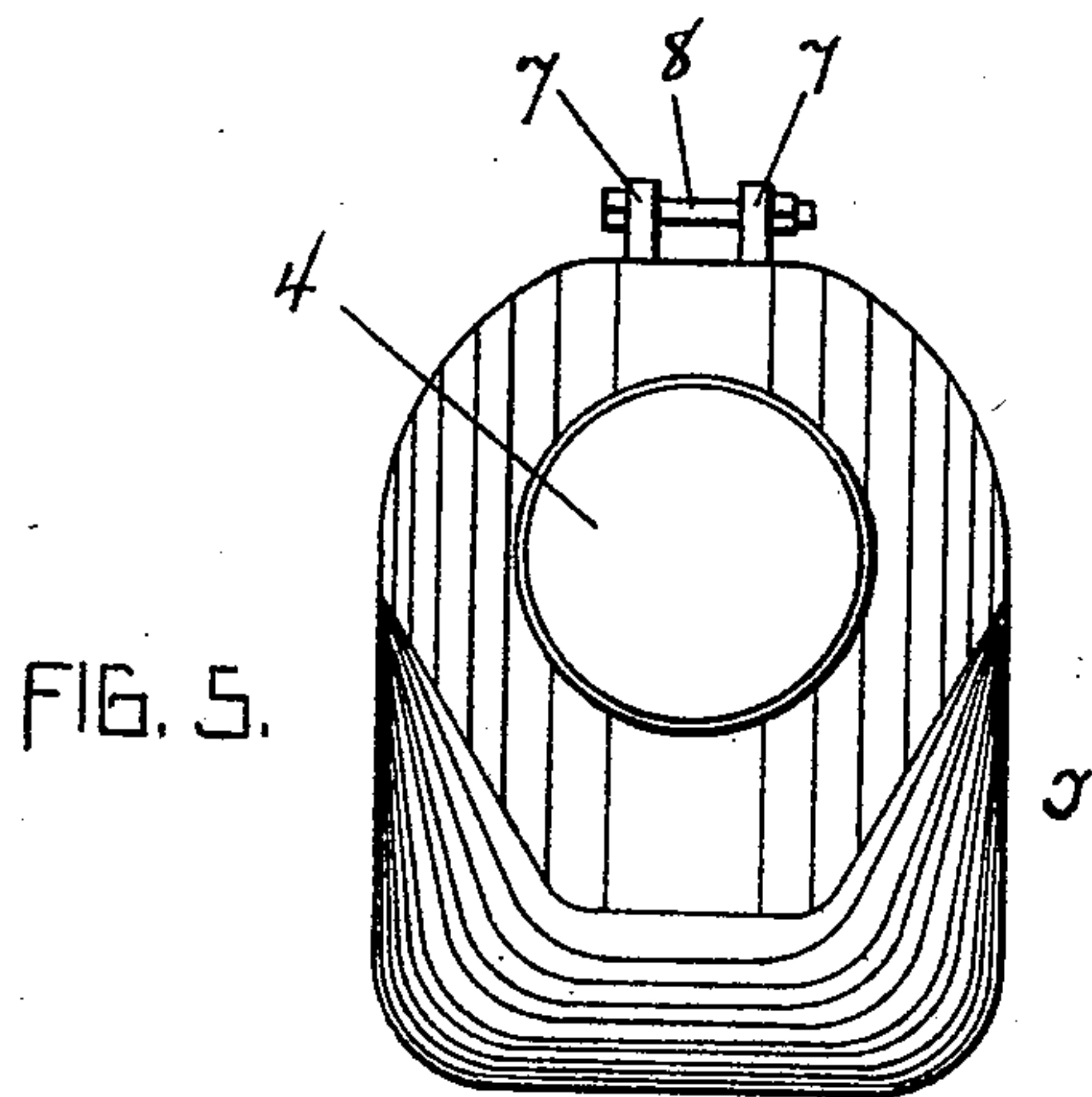
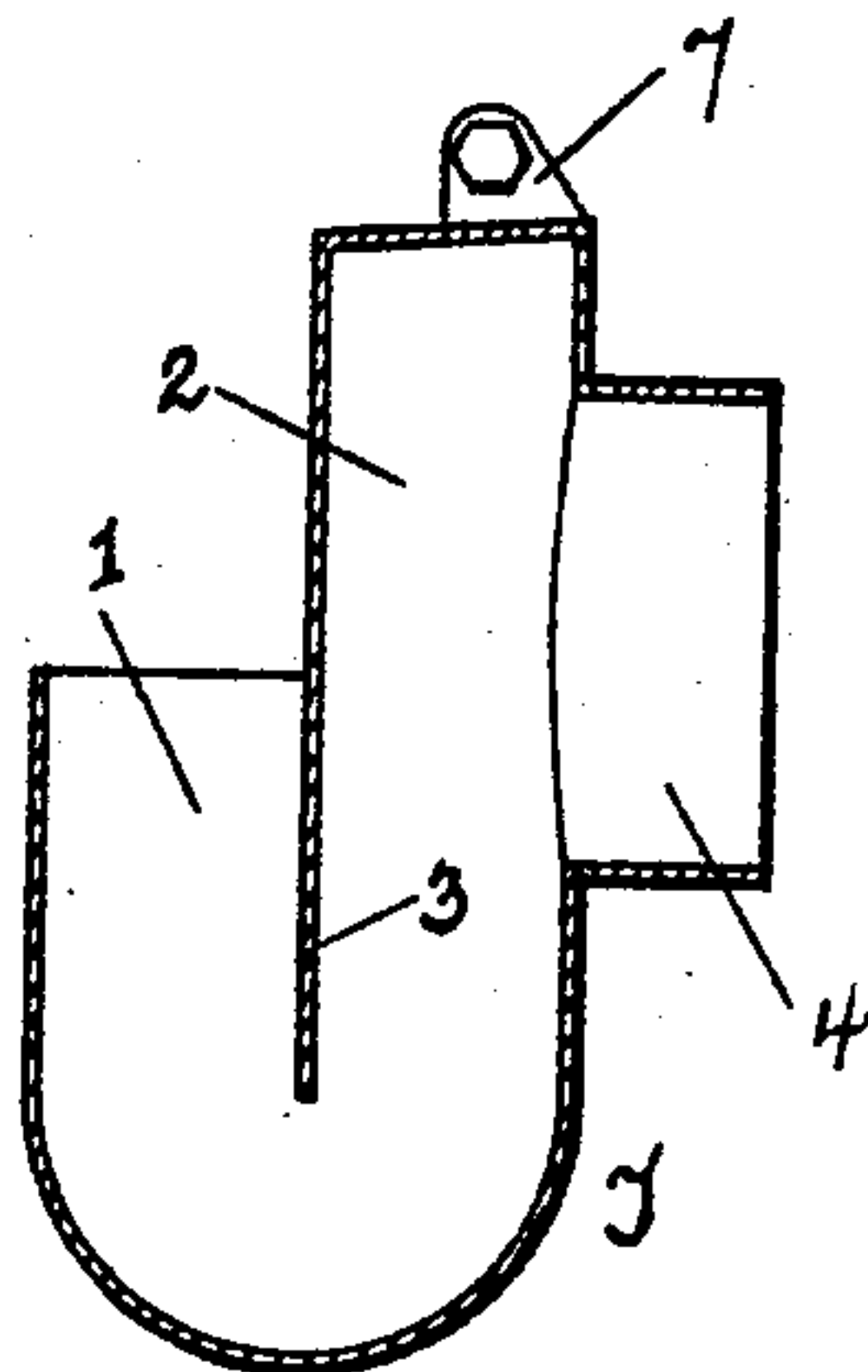
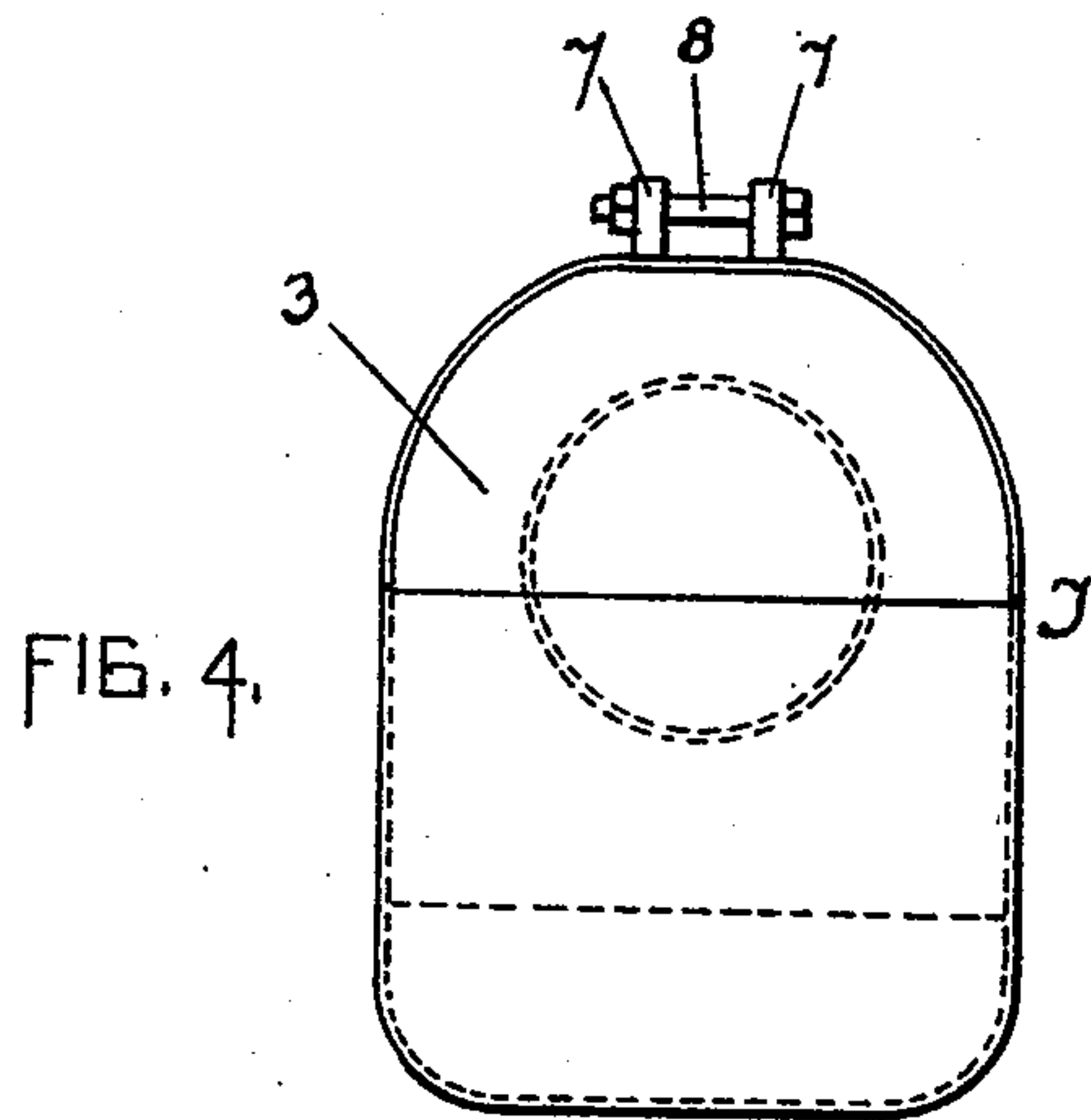
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*John Addison Coleman*



# UNITED STATES PATENT OFFICE.

JOHN ADDISON COLEMAN, OF PROVIDENCE, RHODE ISLAND.

## SEWER-TRAP.

SPECIFICATION forming part of Letters Patent No. 459,440, dated September 15, 1891.

Application filed March 7, 1891. Serial No. 384,182. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ADDISON COLEMAN, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Sewer-Traps, of which the following is a specification.

My improvement relates to sewer-traps for use in catch-basins of sewers; and it consists in certain new and improved constructions and combinations of the several parts thereof, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a top plan view of a catch-basin of a street-sewer which has my invention applied to it. Fig. 2 is a vertical central transverse section of the same. Fig. 3 is a side elevation of my detachable trap removed from the catch-basin. Fig. 4 is a front elevation of the same. Fig. 5 is a rear elevation of the same. Fig. 6 is a vertical central section through the same. Fig. 7 is a top plan view of the same.

A is the catch-basin, built in circular form, of suitable material, below the level of the sidewalk B. It has walls of brick or masonry  $a$  and a bottom  $b$ , which extend below the orifice  $c$  in its side, through which the water caught in it flows to the sewer.

S is the street-level, which is so constructed with relation to the cap-stone  $b^2$  of the catch-basin as to form the entrance  $s$  at the street-gutter for waste water to run from the street into the catch-basin.

In order to prevent the sewer-gas from flowing backward from the outlet  $c$  into the catch-basin and thence into the street, a trap has to be formed over the outlet, which will prevent the backward flow of the sewer-gas into the catch-basin and allow the waste water to escape through the outlet. Heretofore such a trap has been built or formed in the wall  $a$  around and below the escape-outlet  $c$ , and various forms of sliding walls or partitions have been devised in the trap, to be removed when the outlet  $c$  needs to be exposed to be cleaned out. Sometimes, also, a mere hood was hung over the outlet of the catch-basin, which depended upon the water contained in the catch-basin to form the seal and trap the outlet. These traps, first above described, also had to be cleaned out while fixed to the wall

by scooping out their contents, whether semi-fluid or solid, by hand or with small scoops or dippers, and this was a slow and expensive process, as the person doing it must descend through the man-hole  $a^2$  of the catch-basin and remain in a constrained position while doing the work. The sliding walls or partitions of these traps were also expensive to construct and liable to rust or clog up so as to become immovable. The hood suspended over the catch-basin outlet also required that the water in the catch-basin should be present to trap such outlet, and therefore that the catch-basin should be refilled every time it was cleaned out, at great expense and trouble. In order to avoid these difficulties, I have devised a trap T to be applied to the outlet  $c$  in the catch-basin, which is made in one piece and is removable, so that it can be taken away from the outlet and emptied or cleaned out by inverting and washing it out by drawing it out of the catch-basin through the man-hole  $a^2$ , and the outlet  $c$  may also be cleaned out after it is removed.

T is the trap, cast in one piece and formed with the downward passage-way 1 and the upward passage-way 2, opening into each other under the partition 3, which extends downward below the outlet-tube 4, through which the waste water flows into the outlet  $c$  of the catch-basin. This enables the water standing in the trap to always have its level above the lower end of partition 3, and thus seal the trap, so as to prevent the escape of sewer-gas into the catch-basin. This is very important, because the catch-basin may thus be bailed out and cleaned without untrapping its outlet and need not be afterward refilled in order to trap the same again. The outlet-tube 4 is smaller than the outlet-passage  $c$  of the catch-basin, so as to readily enter and project a short distance into the latter when the trap is in place in the catch-basin, and the trap is formed with its rear wall 5 slightly convex on the outside around the tube 4, so as to establish a close fit against the wall of the catch-basin around the outlet  $c$ .

In order to secure the trap in place in the catch-basin, a hook 6 is driven into the wall of the latter at the proper distance above the outlet  $c$  to suspend the trap in its normal position with tube 4 entered into outlet  $c$ . Ears



77 are cast on the trap through holes in which a bolt or pin 8 is passed, forming an eye to drop over the hook 6 and sustain the trap on the latter.

5 Before hanging the trap on the hook 6 its rear convex wall around the tube 4 and the heel part of the tube is smeared with stiff lime putty, which adheres to the wall of the catch-basin and the inside of outlet *c* when  
10 the trap is hung in place and forms a gas-tight joint between them and the trap, preventing the escape of sewer-gas between them. If at any time the lower bend of the trap becomes filled with sand or dirt, which settles in it, a  
15 hook can be let down through the man-hole  $\alpha^2$  of the catch-basin and hooked into the eye of the trap, and it can be lifted off the hook 6 and drawn out through the man-hole and washed and cleaned out and returned to place  
20 without even descending into the catch-basin. The outlet *c* into the sewer can also be cleaned out at the same time by a hose introduced through the man-hole. The catch-basin itself can also be cleaned out when the trap is re-  
25 moved much easier than if the latter were permanently secured in it and not removable.

The expense of constructing the trap and securing it in the catch-basin is also reduced to a minimum according to this plan.

30 What I claim as new and of my invention is—

1. The combination of the catch-basin provided with the outlet *c* in its side wall, with the removable trap T, applied to the outlet *c*  
35 and provided with the partition 3, extending below the outlet *c* and arranged to form a

water seal in the trap below the level of the water contained therein, substantially as described.

2. The combination of the catch-basin pro- 40 vided with the outlet *c* in the side wall thereof, with the removable trap T, applied to the outlet *c* and provided with the tube 4, entering said outlet, and the partition 3, extending below the tube 4 and arranged to form a wa- 45 ter seal in the trap below the level of the water contained therein, substantially as described.

3. The combination of the catch-basin provided with the man-hole  $\alpha^2$  in its top and the 50 outlet *c* in the side wall thereof, with the removable trap, made small enough to pass through said man-hole, applied to the outlet *c* and provided with the partition 3, extend- 55 ing below the outlet *c* and arranged to form a water seal in the trap below the level of the water contained therein, substantially as described.

4. The combination of the catch-basin provided with the outlet *c* in the side wall there- 60 of, with the removable trap having the convex rear wall and the tube 4 extending therefrom into outlet *c*, and also having the partition 3 extending below said tube and arranged to form a water seal in the trap below the 65 level of the water contained therein, substantially as described.

JOHN ADDISON COLEMAN.

Witnesses:

O. LAPHAM,  
R. E. LYMAN.