

(No Model.)

2 Sheets—Sheet 1.

W. W. MAYSENT & F. JONES.

RAILROAD TANK.

No. 371,467.

Patented Oct. 11, 1887.

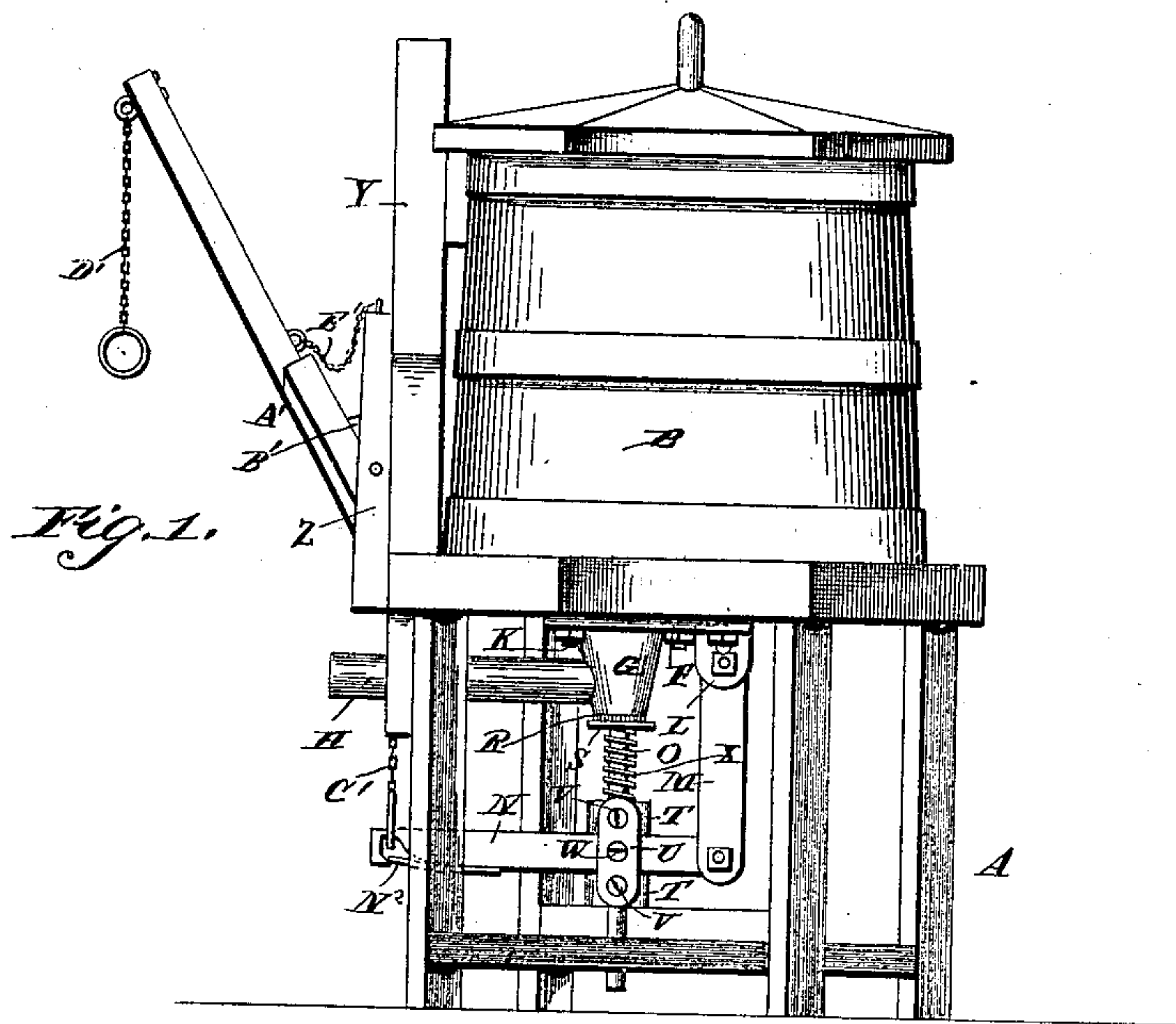
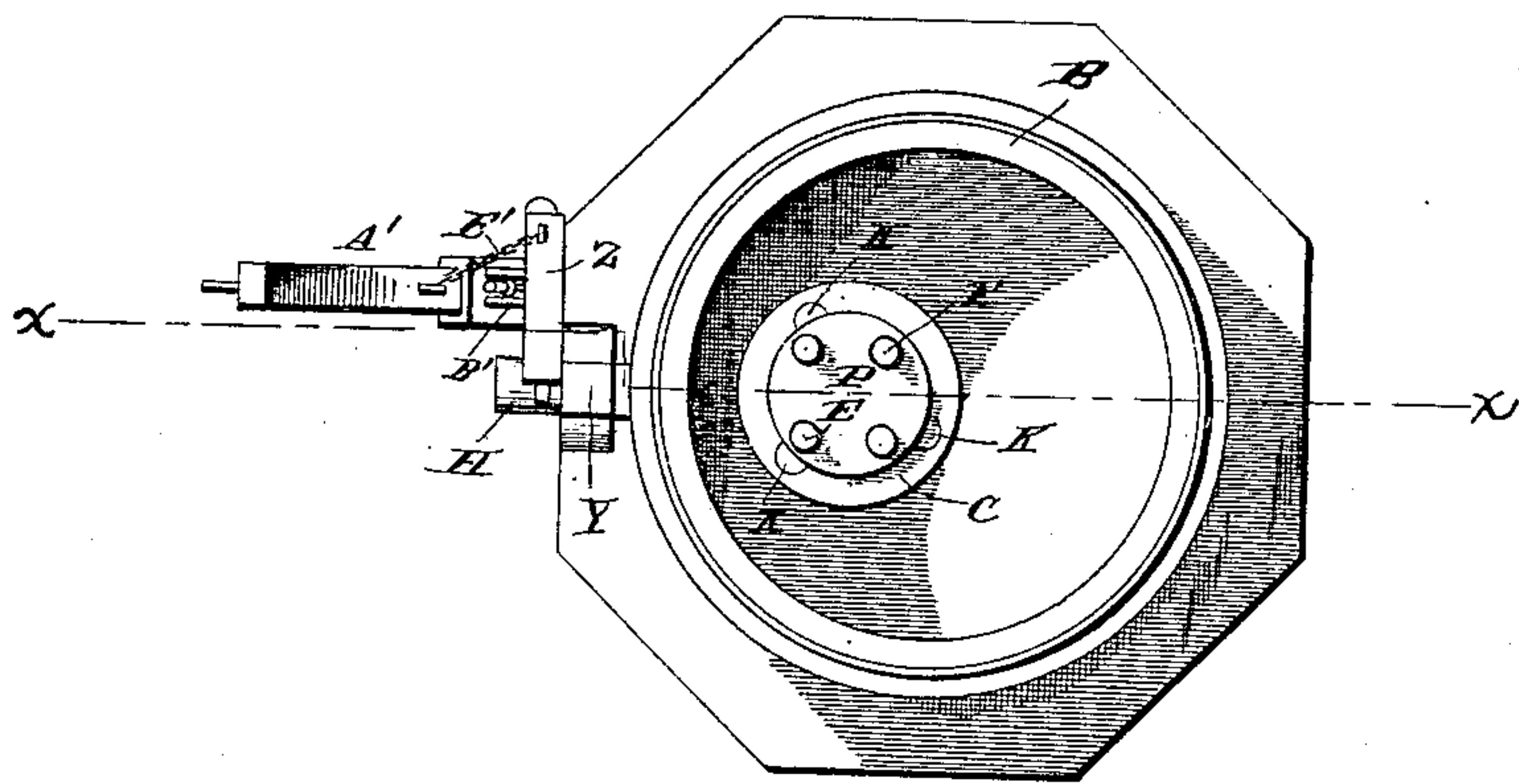


Fig. 3.



Witnesses

C. B. Taylor
J. W. Garner

Inventors
J^m W. Maysent
Frank Jones
Attorneys

By the attorneys

Chauvlin

(No Model.)

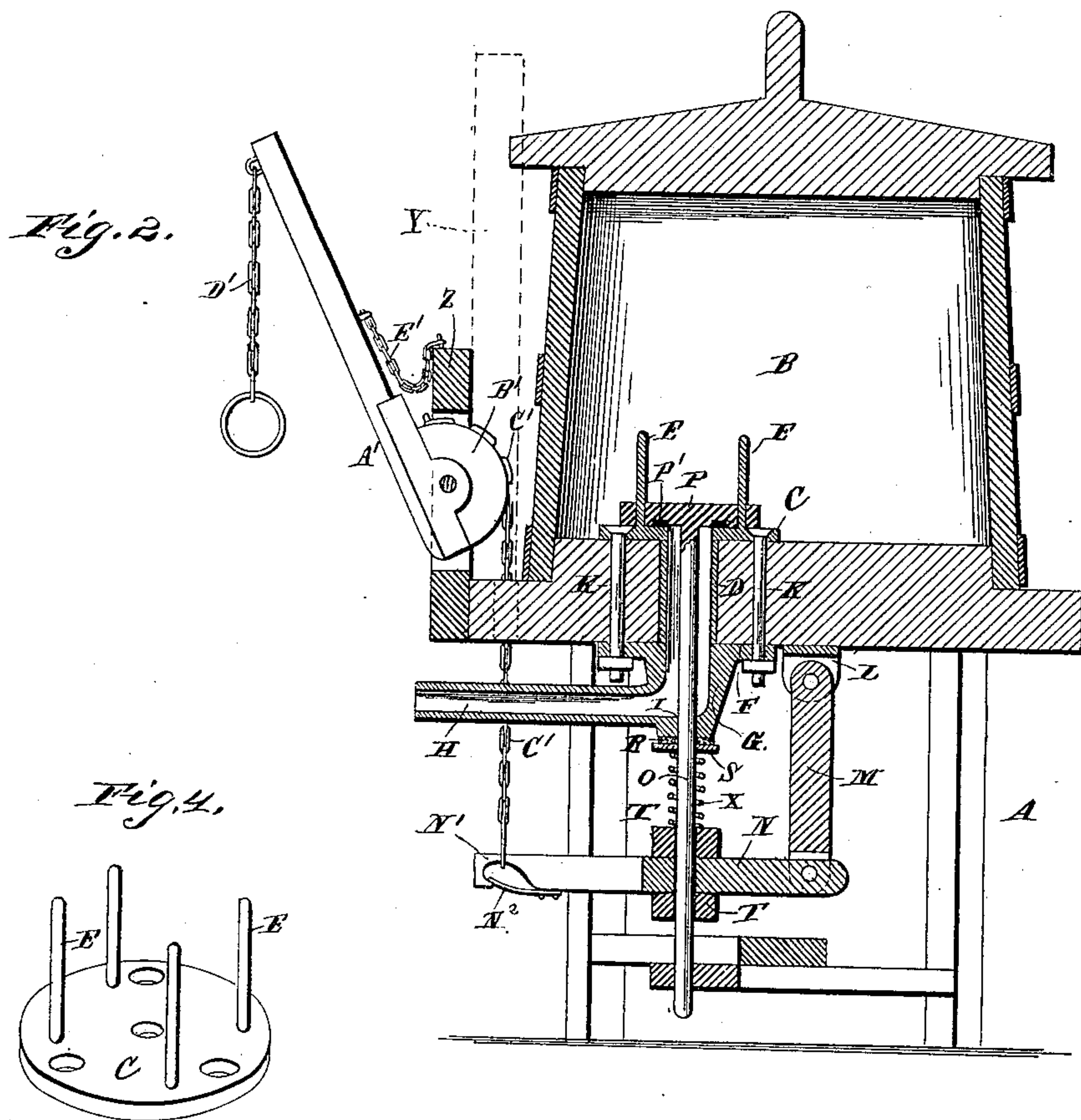
2 Sheets—Sheet 2.

W. W. MAYSENT & F. JONES.

RAILROAD TANK.

No. 371,467.

Patented Oct. 11, 1887.



Witnesses
D. Taylor
J. G. Garner

Inventors
Wm W. Maysent
Frank Jones
By their Attorneys
C. A. Howdley

UNITED STATES PATENT OFFICE.

WILLIAM WINFIELD MAYSENT AND FRANK JONES, OF EARLING, IOWA.

RAILROAD-TANK.

SPECIFICATION forming part of Letters Patent No. 371,467, dated October 11, 1887.

Application filed January 29, 1887. Serial No. 225,910. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM WINFIELD MAYSENT and FRANK JONES, citizens of the United States, residing at Earling, in the county of Shelby and State of Iowa, have invented a new and useful Improvement in Railroad-Tanks, of which the following is a specification.

Our invention relates to an improvement in railroad-tanks for supplying locomotive-tenders with water; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the drawings, Figure 1 is a side elevation of a tank embodying our improvements. Fig. 2 is vertical sectional view of the same on line *xx* of Fig. 3. Fig. 3 is a top plan view. Fig. 4 is a detail view.

A represents a vertical supporting-frame of the usual construction, and B represents the usual railway-tank, which is supported on the upper side of the frame A. In the bottom of the tank is made a discharge-opening in which is located a metallic valve-seat, C, having a depending sleeve or nozzle, D, which extends through the opening in the bottom of the tank. The valve seat forms a circular disk, and from the upper side of the said disk, at suitable regular distances apart, project vertical rods E.

F represents a circular disk which is provided with a depending nozzle, G, from one side of which projects a discharge-spout, H. The lower end of the nozzle G is closed and is provided with a circular opening, I.

K represents a series of bolts which extend through the disks C and F, and also through the bottom of the tank and the upper side or floor of the supporting-frame therefor, and serve to clamp the disk F to the under side of the platform of the frame and the disk C on the bottom of the tank.

L represents a depending bracket which is secured to the platform of the frame A, near the disk F, and to the said bracket is pivoted the upper end of a depending link, M. To the lower end of the said link is pivoted the inner end of a lever-bar, N.

O represents a vertical rod which extends through the opening I in the lower end of the nozzle G and up through the nozzle or sleeve

of the valve-seat C, the lower end of the said rod passing through an opening which is made in the lever-bar N. To the upper end of this rod is attached a valve, P, which comprises a circular disk that is provided with a series of openings to receive the vertical guide-rods E, so that the said valve will be guided vertically by the said rods. On the lower side of the valve is a washer, P', which is made of leather or other suitable elastic material.

R represents a packing of rubber which is arranged on the rod O and bears against the lower end of the nozzle G, so as to prevent leakage through the opening I around the rod. A metallic washer, S, bears against the lower side of the said packing.

T represents a pair of blocks which are clamped to the rod O, one of the said blocks being arranged above the lever-bar N and the other block being arranged below the said lever-bar. These blocks are connected together by links U, and screws V extend through the extremities of the said links and enter the blocks to connect the links thereto, and similar screws, W, extend through the central portions of the links and enter opposite sides of the lever-bar N.

A coiled extensile spring, X, is placed upon the rod O, and bears between the washer S and the upper block, T, the function of the said spring being to compress the said washer against the packing.

From the foregoing description it will be readily understood that when the free end of the lever-bar N is raised the rod O will be also raised, so as to cause the valve to be elevated above the valve seat, and thus permit water to flow from the bottom of the tank out through the spout H into the tender of the locomotive standing on the track alongside the tank.

Y represents a vertical standard which is attached to one side of the platform at its lower end, and has its upper end attached to one side of the tank, so as to firmly secure the latter on the raised platform. To one side of the standard Y, near the lower end thereof, is secured a laterally-projecting block, Z, which is provided with a vertical slot. In the said slot is fulcrumed the inner end of a lever, A', which is provided with a semicircular cam, B',

the said cam having a peripheral groove in which is secured the upper end of a chain, C'. The lower end of this chain is provided with a link which catches over a hook, N', formed at the outer end of the lever-bar N, and a flat spring, N², is secured under the said lever-bar and closes the lower side of the hook, so as to prevent the link from becoming accidentally disengaged therefrom. From the free end of the lever A' depends a chain, D', which is adapted to be grasped by a person standing on the tender of the locomotive, when the latter stops at the tank, and by means of the said chain D' the lever A' may be lowered, thereby causing the lever-bar N to be raised, so as to open the valve and permit water to be discharged from the tank into the tender. In order to prevent the lever A' from being depressed too far, I provide a chain, E', the upper end of which is attached to the upper side of the block Z and the lower end of which is attached to the lever A'. As soon as the chain D' is released by the person standing on the locomotive-tender, the lever A' will be raised by reason of the spring bearing downwardly upon the lever-bar N, which is connected to the lever A'.

From the foregoing description and by reference to the accompanying drawings it will be observed that the operative parts of the tank which are liable to get out of order are located below the platform of the supporting-frame, and are within plain sight and are easily accessible, so that necessary repairs may be readily made in a very short time.

By extending the rod which operates the valve downwardly through the bottom of the tank it is entirely protected from contact with the water in the tank and thereby prevented from becoming frozen and inoperative in the tank.

We are aware of Patent No. 122,583, in which is shown a discharge-pipe having a vertical and a horizontal arm and provided with a vertical opening in its lower side. The valve resting on the upper end of the vertical portion of the discharge-pipe is provided with a central depending stem which passes down through the opening in the discharge-pipe, and a lever hung upon the discharge-pipe is connected to the lower end of this depending stem. In this patent a packing-box is employed below the opening in the discharge-pipe, and the said packing-box is practically the only support given the valve-stem.

We are also aware of Patent No. 220,580, in which is shown a horizontally-operating valve, the stem of which projects through the side of

the tank. This construction and arrangement necessitate the use of additional devices to prevent the freezing of the stem.

It will be observed that we employ no packing-box around the opening in the discharge-pipe, and freezing at that point is not so likely to occur, leakage being prevented by the packing R and washer S, held against the under side of the discharge-pipe by the spring X. It will also be observed that the arrangement and construction of the parts of our device are such as to hold the valve-stem in a true vertical position at all times, and thereby prevent the valve becoming loose on its seat. By reference to Fig. 2 of the drawings it will be seen that the lever N serves to guide the lower end of the valve-stem, and that the said stem is also guided by the vertical opening I in the discharge-pipe. The rods E also serve to guide and support the valve, and the valve-stem extends downward through the bottom cross-braces of the supporting-frame, and the said braces thus serve as an additional support and guide for said stem. The valve is thus guided and supported in a true vertical position, and can be very easily operated without becoming loose and rattling on its seat.

Having thus described our invention, we claim—

As an improvement in railroad-tanks, the combination, with the tank, of the disk C, having the vertical rods E, secured to the floor of the tank, the disk F, secured to the bottom of the same, and having the discharge-pipe G H, provided with the opening I, projecting therefrom, the lever N, having one end pivoted to a link, M, depending from the bottom of the tank and its other end connected with the operating mechanism, the valve fitted on the rods E, and having the depending stem or rod O, passing through the opening I, the lever N, and the bottom cross-braces of the supporting-frame, whereby three fixed supports or guides are provided for the valve-stem to keep the valve true to its seat, the blocks T, connecting the said rod to the lever N, and the packing R and washer S, held to the opening I by the spring X, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

WILLIAM WINFIELD MAYSENT.
FRANK JONES.

Witnesses:

G. H. DOUGHTY,
H. G. RETHLEPEN.