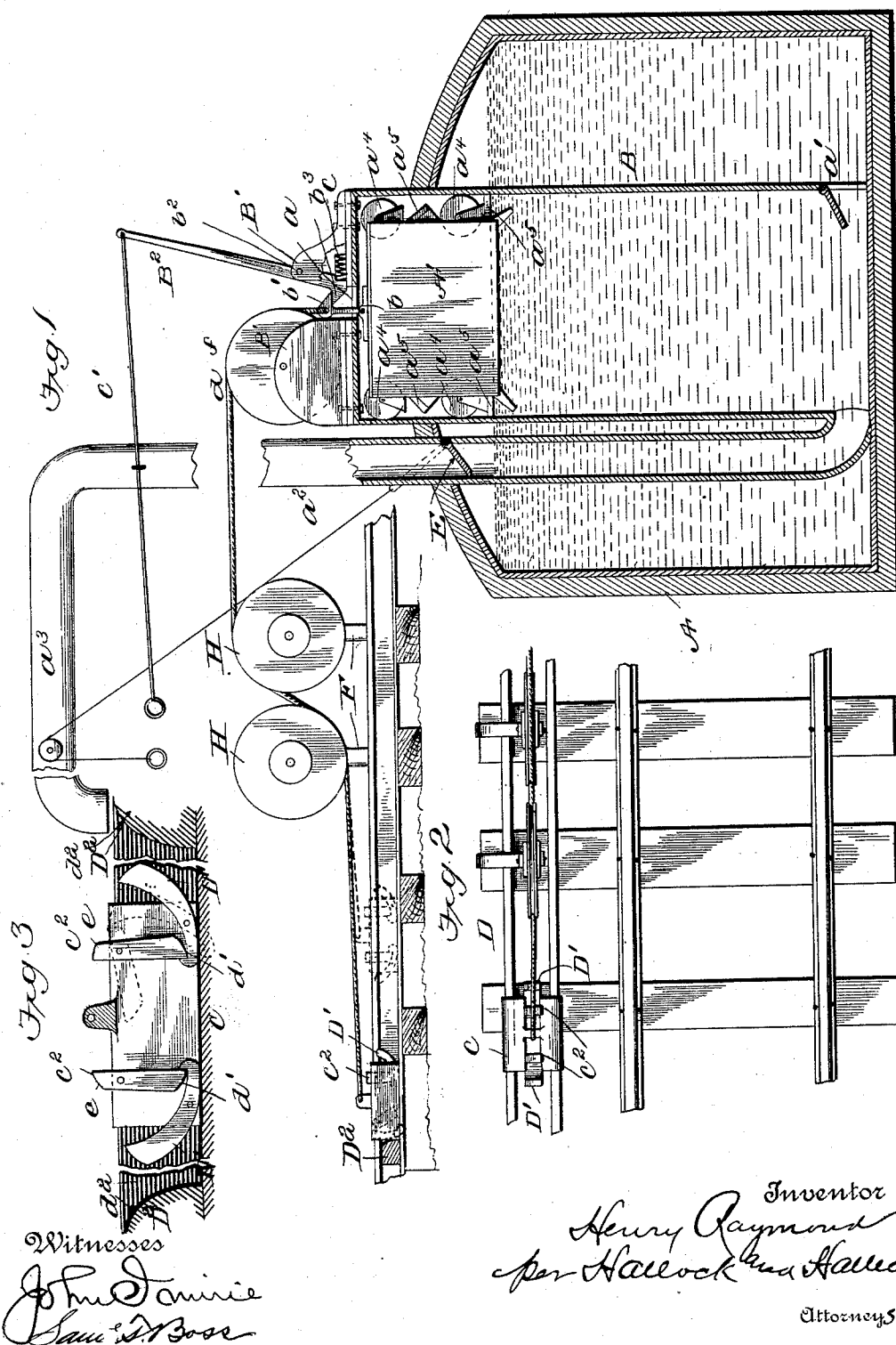


(No Model.)

H. RAYMOND.
TANK FEEDER.

No. 524,689.

Patented Aug. 14, 1894.



UNITED STATES PATENT OFFICE.

HENRY RAYMOND, OF MISER, ASSIGNOR OF ONE-THIRD TO JOHN J. E. POE,
OF KNOXVILLE, TENNESSEE.

TANK-FEEDER.

SPECIFICATION forming part of Letters Patent No. 524,689, dated August 14, 1894.

Application filed October 25, 1893. Serial No. 489,112. (No model.)

To all whom it may concern:

Be it known that I, HENRY RAYMOND, a citizen of the United States, residing at Miser, in the county of Blount and State of Tennessee, have invented certain new and useful Improvements in Tank-Feeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to tank feeders and is especially designed for use on railways. In automatic devices of this character great inconvenience has been experienced by reason of the apparatus, which is generally quite complicated, getting out of order or completely breaking down.

The object of my invention is to provide an apparatus that is simple and effective in operation and at the same time strong and durable and further to provide a non freezing tank feeder.

The nature of the invention therefore consists of certain constructions and combinations, all of which will be fully set forth in the specification and pointed out in the claims, reference being had to the accompanying drawings, wherein—

Figure 1 is a side elevation showing the apparatus in its normal position. Fig. 2 is a plan view of the railway track and the track D, and Fig. 3 is a longitudinal sectional view of the sliding block and part of its track.

A represents the water tank which is constructed of iron or other suitable material and which I prefer to be placed under ground and below the frost level so that the water in said tank will not freeze. Within the tank I place a cylinder B which is provided at its top with the opening a and near its bottom with the inwardly opening valve a' and the distributing pipe a^2 which is in turn connected with the spout a^3 which delivers the water to the tank in the tender.

The heavy cylindrical weight or plunger A' is located within the cylinder B and is provided upon its sides with two or more wheels a^4 , which serve to make its descent and ascent more easy, and the valves a^5 which open as the weight A' descends and prevent the water from rising over it.

Secured to the top of the weight A' in any desirable manner is the bar b which carries the conical head b' and to said conical head is secured a chain or cable d the purpose of which will be hereinafter set forth. B' represents a frame work of suitable structure to which is pivoted at b^2 the lever B^2 having upon its lower end the catch b^3 which is designed to engage the conical head b' on the bar b and thus support the weight A' at the top of the cylinder (see Fig. 1). To insure contact between the head b' and catch b^3 , the lever B^2 is provided with the spring c which pushes the catch b^3 toward head b' . Attached to the upper end of lever B^2 is a cord c' which is used to draw the lower end of the lever away from the head b' thus sinking the weight A' .

Adjacent to the railway track and running parallel to it is the track D upon which the block or carriage C, to which is secured the cable d , is adapted to run. This block is shown as being oblong though it may be made any desired shape, and is provided at each end with a pivoted dog D' having its under side curved and provided at the rear with the notch d' . Pivoted just over each of the dogs D' and projecting above the block is the standard c^2 , the lower end of which engages with and is held by the notch d' . Located at each end of the track D, which is of a convenient length, is the stop D^2 having the slanting face d^2 .

The operation of the device is as follows: The device being in the position shown in Fig. 1 an engine desiring a supply of water approaches (from either direction) and when in the proper position the engineer pulls the cord c' thereby shifting the position of the lever B^2 and tripping the catch b^3 . The weight A' being unsupported immediately descends, and as the water cannot rise above it either by reason of valves a^5 or the snug fit of the weight, it forces the water in the cylinder B up the pipe a^2 and out of the spout a^3 into the tank of the tender. The flow of water is cut off by means of a valve E in the pipe a^2 . It is now desired to raise the weight A' to its normal position and the engine is moved along the track until a projection thereon, built for the purpose, comes in contact with

one of the standards c^2 . It will pass over the first one owing to the slanting face e and will in turn strike the standard ahead and move the block C along track D thus drawing the weight to the top of the cylinder B by means of the cable d which passes over a wheel f on frame B' and over other suitable wheels H on frame F. When the block approaches either end of the track D the head b' and catch b^3 engage and simultaneously the pivoted dog strikes the inclined face d^2 of the stop D² thus lowering the rear of said dog and tripping its connection with the standard c which swings down and allows the projection on the engine to pass on unobstructed.

As the weight A' rises it creates a vacuum in the cylinder and the valve a' opens and allows water to flow in until the weight is in its normal position.

It will be readily seen that the valves a^3 on weight A' may be dispensed with, and the weight made large enough to fit the cylinder snugly, without departing from the spirit or scope of my invention.

What I claim as new is—

1. In a tank feeder a tank provided with a cylinder having an inlet valve and an outlet pipe and a weight within said cylinder carrying upon its top a head which is adapted to engage with a spring held catch thereby supporting the said weight in a fixed position, substantially as set forth.

2. In a tank feeder, a tank containing a cylinder having an inlet valve and an outlet pipe, a weight carrying upon its top a projecting head and having a cable one end of which is secured to the said head and the

other end secured to a block which is adapted to slide upon a track, and a spring held lever having a catch adapted to engage with the said head substantially as described.

3. In a tank feeder, a tank provided with a cylinder having an inlet valve and an outlet pipe, a weight within said cylinder said weight being supported by the head and catch as described, and provided with a cable secured to a sliding block whereby said weight may be raised, substantially as set forth.

4. In a tank feeder, a tank, a cylinder having an inlet valve and an outlet pipe located within said tank, a weight within said cylinder carrying upon its upper end a conical head that is engaged by a spring held lever, a block having pivoted dogs and standards engaging with said dogs and moving upon a track, the said weight and block being connected by a cable, substantially as set forth.

5. In a tank feeder, a tank, a cylinder having an inlet valve and an outlet pipe located within said tank, a weight located within said cylinder and carrying the head b' which is adapted to engage with the catch on the spring held lever, means for shifting said lever and a block carrying the pivoted dogs and the standards which are operated upon by said dogs in combination with the track D substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY RAYMOND.

Witnesses:

J. B. JONES,

JAS. H. WELCKER.