

(No Model.)

2 Sheets—Sheet 1.

P. SATTELKAU & H. R. WINKELMANN.
APPARATUS FOR SUPPLYING LOCOMOTIVE TENDERS WITH WATER.
No. 557,613. Patented Apr. 7, 1896.

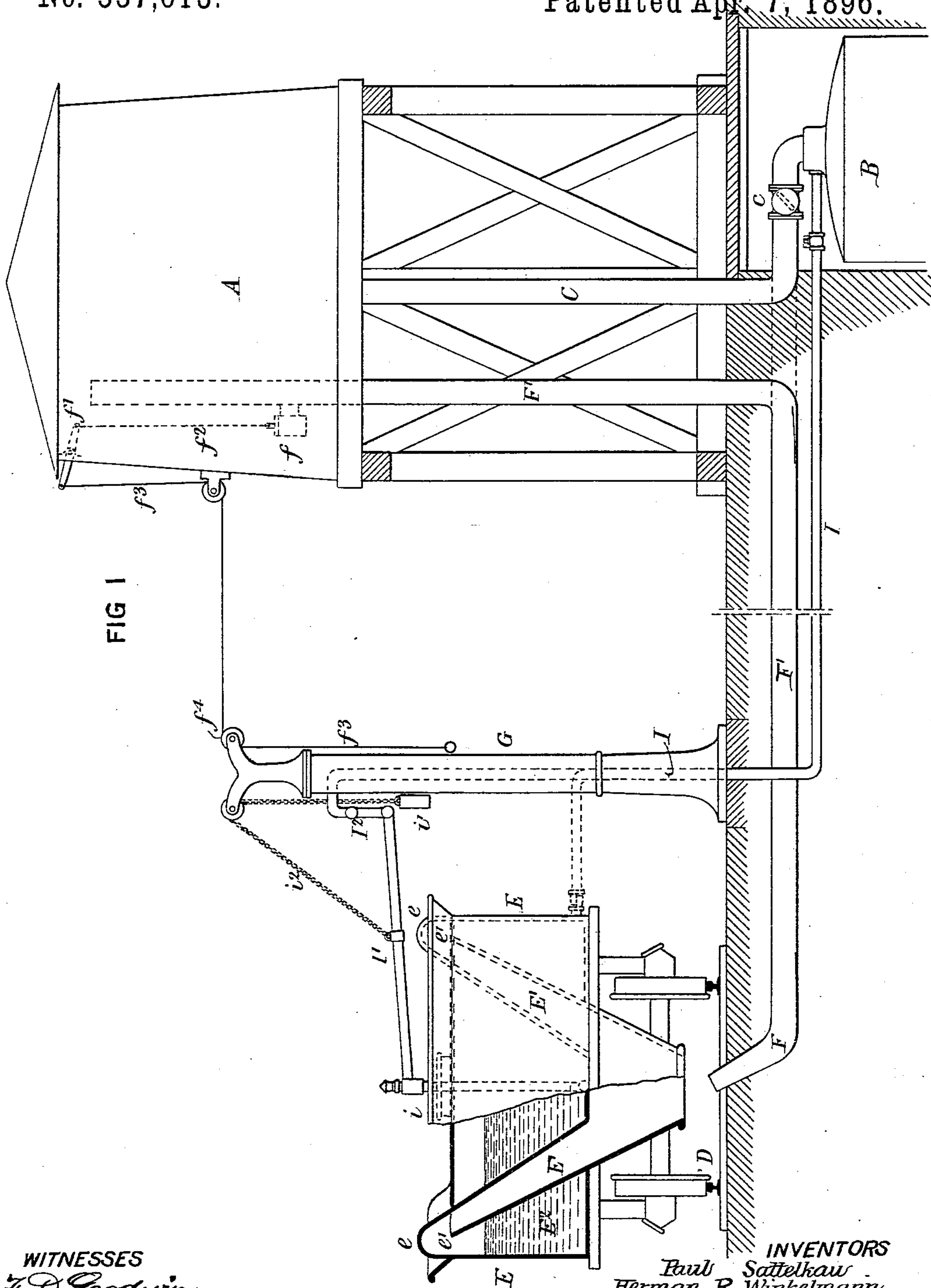


FIG 1

WITNESSES
T. D. Goodwin
W. N. Barr.

INVENTORS
Paul Sattelkau
Herman R. Winkelmann
By their Attorneys

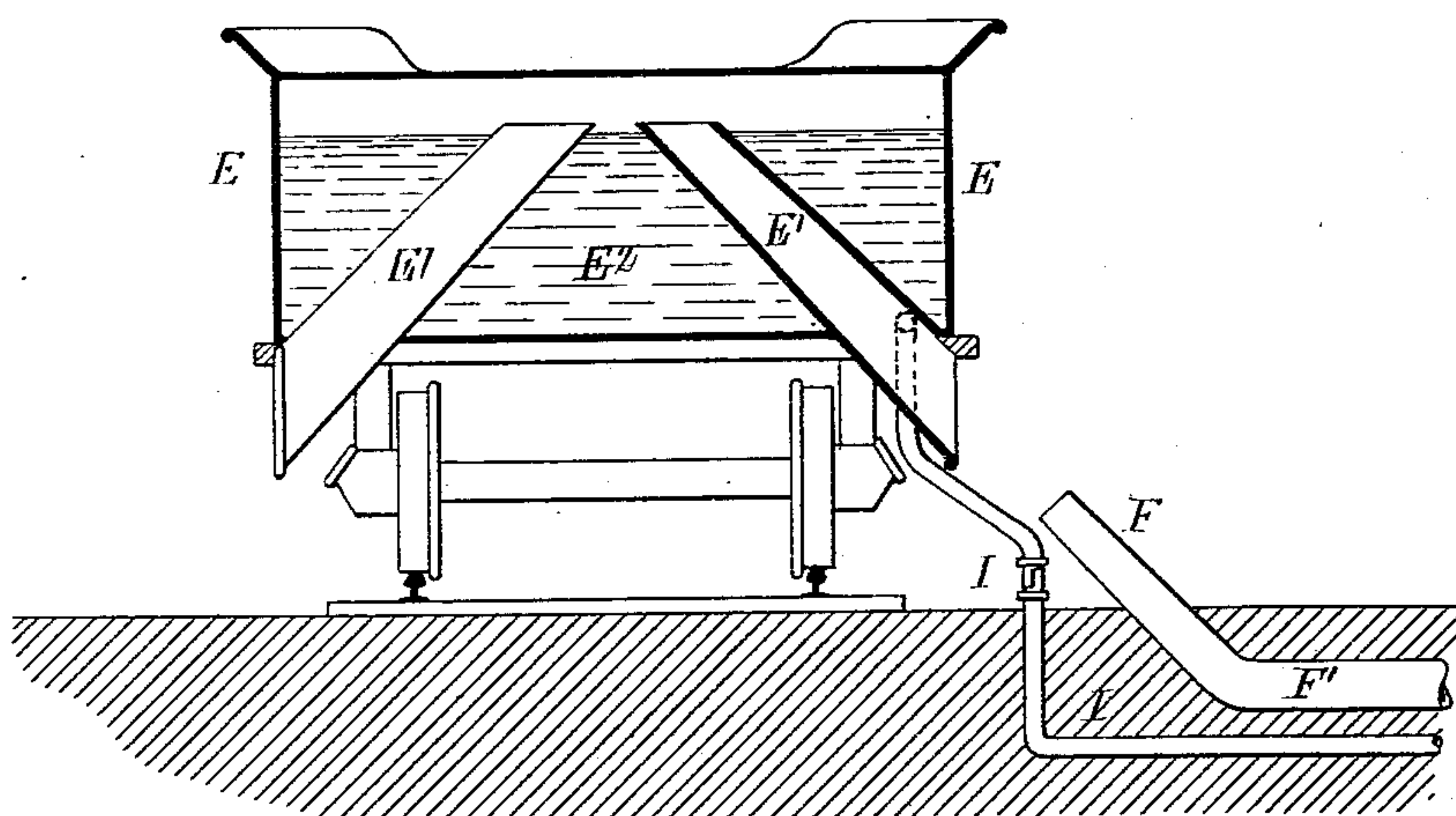
Horn & Horn

(No Model.)

2 Sheets—Sheet 2.

P. SATTELKAU & H. R. WINKELMANN.
APPARATUS FOR SUPPLYING LOCOMOTIVE TENDERS WITH WATER.
No. 557,613. Patented Apr. 7, 1896.

FIG 2



WITNESSES

F. D. Godwin.
W. A. Barr.

INVENTORS

Paul Sattelkau
Herman R. Winkelmann
By their Attorneys

Herman & Winkelmann

UNITED STATES PATENT OFFICE.

PAUL SATTELKAU AND HERMAN R. WINKELMANN, OF PHILADELPHIA,
PENNSYLVANIA.

APPARATUS FOR SUPPLYING LOCOMOTIVE-TENDERS WITH WATER.

SPECIFICATION forming part of Letters Patent No. 557,613, dated April 7, 1896.

Application filed February 19, 1894. Serial No. 500,739. (No model.)

To all whom it may concern:

Be it known that we, PAUL SATTELKAU and HERMAN R. WINKELMANN, citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Apparatus for Supplying Locomotive-Tenders with Water, of which the following is a specification.

The object of our invention is to dispense with the overhanging gooseneck usually employed in water-supplying devices for the water tanks or tenders of locomotives by so arranging the tender that it can be charged with water from below while the locomotive is standing at the water-station.

Figure 1 of the accompanying drawings illustrates a water-tank, a water-elevator, and a tender, the tender being partly in section; and Fig. 2 is a view of a modification of our invention.

A is the storage-tank mounted, in the present instance, upon suitable framework.

B is the water-elevator, preferably of the automatic steam-vacuum type, as illustrated in the United States Patent No. 521,441, dated June 12, 1894; but it will be understood that air or gas under pressure may be used without departing from our invention, or an ordinary pump may be used to force the water into the storage-tank without departing from the main feature of the invention.

C is the discharge-pipe of the water-elevator having a valve *c*. This pipe extends to the storage-tank A.

D is the track, and E is the the tender. Within the tender are two inclined pipes *E'* joined at the base, as shown, forming a funnel-shaped opening for the inlet of water. The pipes *E'* have hoods *e* and open into the tank at *e'*, so that water forced up through either of the pipes will be turned and discharged into the tender-tank *E*².

F is a discharge-nozzle, preferably inclined on the same line as the pipes *E'* of the tender, and this pipe is centrally situated between the rails of the track D. This nozzle F forms part of a pipe *F'* leading from the storage-reservoir A, so that water will flow from the reservoir by gravity and with sufficient force to pass through the pipes *E'* of the tender and into the tender-tank *E*².

The pipe *F'* may be connected in some instances directly with the discharge-pipe of the water-elevator, as shown by dotted lines, when the reservoir is not used.

G is a post situated adjacent to the track, and passing through this post, in the present instance, is a fluid-pressure pipe I, connected to a pivoted section I' by means of a link-section I². The pipe I extends to the water-elevator B, as shown, and the extension I' may be attached to the pressure-pipe *i* on the tender or on the locomotive. In the present instance this pressure-pipe is on the tender and is connected to the steam-dome of the locomotive and is situated near the rear of the tender. Consequently the fluid in the pressure-pipe will be steam and the water-elevator will be of the steam-vacuum type, so that as soon as steam is turned into the pipe I water is forced out of the tank of the water-elevator B up into the storage-tank A, and the overflow from this storage-reservoir will pass down the pipe *F'* through the nozzle F into the tender, which is so situated on the track that the pipe *E'* will be in line with the nozzle, so that it will be seen by the above construction that water will be forced into the tender only when the pressure-pipe is connected to the pressure-pipe on the tender or locomotive.

In some instances the pressure-pipe *i* on the tender may extend from one side of the tender and a short coupling may be used, as shown by dotted lines in Fig. 1. As soon as the tender is charged the extension I' of the pipe I is uncoupled from the pipe *i* and the counterweight *i'*, connected to the chain *i*², raises the extension I' clear of the tender.

An emergency-valve *f* is connected to a lever *f'* by a chain or cord *f*², and the lever is connected to a cord or chain *f*³, which passes over a wheel *f*⁴ on the standard G. This valve is only used when the fluid-pressure connections are out of order.

As a modification of the construction of the tender we have illustrated in Fig. 2 a tender having passages *E'*, separated at the bottom and terminating at the top near the center of the tender. Each passage is open at the bottom and communicates with the tender at the top, so that the nozzle in this instance may be

placed outside of the track, as shown, instead of between the rails, as illustrated in Fig.

1. The passage E' instead of inclining transversely may incline longitudinally without
5 departing from our invention, the main idea being to so arrange the passage that the water can be readily projected into the tank, and, as shown in Fig. 2, the standard G may be
10 dispensed with and a flexible or other coupling may couple the fluid-pressure pipe on the tender to the one of the water-elevator.

By the above-described construction we are enabled to dispense entirely with the goose-neck usually employed and may make all the
15 connections below the tracks, and the water-elevator and reservoir may be placed some distance from the nozzle and two or more nozzles can be connected to the service-pipe by the use of suitable valves.

20 We claim as our invention—

1. The combination in a locomotive-tender, of a tender-tank, a passage-way open at the bottom and communicating at the top with the
25 nozzle in line with the passage-way will be

directed into the tank, substantially as described.

2. The combination in a locomotive-tender, of the tank, two inclined pipes terminating in a funnel-shaped opening under the tank
30 and each communicating with the tank at the upper end, a hood over each outlet to direct the water into the tank, substantially as described.

3. The combination in a locomotive-tender, 35 of the tank, two inclined pipes arranged transversely in respect to the tender and extending above the water-line of the tender and open at a point below the tender-tank so that water projected from the nozzle in line with either
40 pipe will be directed up into the tank, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

PAUL SATTELKAU.

HERMAN R. WINKELMANN.

Witnesses:

EDWIN C. FREEMAN,

HENRY HOWSON.