

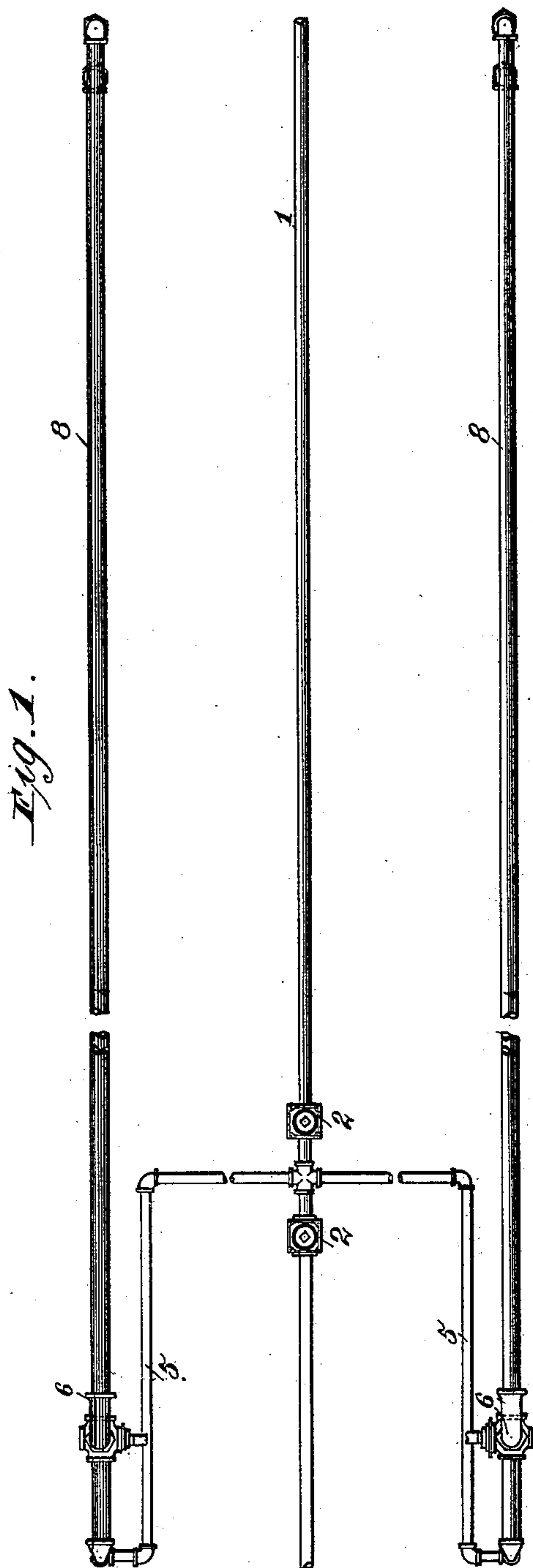
(No Model.)

R. M. DIXON.

DRAIN MECHANISM FOR CAR HEATERS.

No. 551,182.

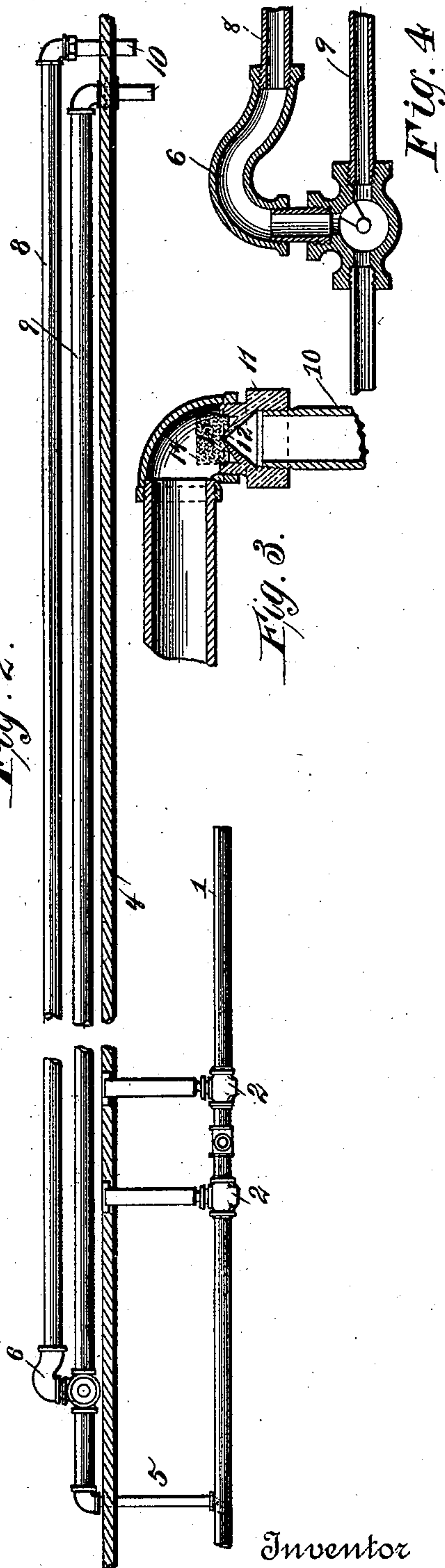
Patented Dec. 10, 1895.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT MUNN DIXON, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE
SAFETY CAR HEATING AND LIGHTING COMPANY, OF NEW JERSEY.

DRAIN MECHANISM FOR CAR-HEATERS.

SPECIFICATION forming part of Letters Patent No. 551,182, dated December 10, 1895.

Application filed October 18, 1892. Serial No. 449,267. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MUNN DIXON, of East Orange, county of Essex, and State of New Jersey, have invented certain new and
5 useful Improvements in Drain Mechanism for Car-Heaters, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a
10 simplified form of drain-tip for a steam car-heater, which may be manufactured and operated at less expense than those at present in common use.

My invention is designed to be used in connection with that class of car-heaters in which
15 steam from the locomotive or other source is passed through radiators within the car—as, for example, shown in my Patent No. 435,484.

In the accompanying drawings, Figure 1 is
20 a plan view of an individual car-heating system shown as attached to a train-pipe as in use. Fig. 2 is a side elevation of the same shown as attached to the floor of a car. Fig. 3 is a detail sectional view of an open drain-cock. Fig. 4 is a detail sectional view of one
25 of the three-way valves.

Referring to the figures on the drawings, 1 indicates a train-pipe or main supply-pipe provided with train-pipe cocks 2. The train-pipe in use passes underneath the floor 4 of
30 a car and communicates with the source of steam-supply.

5 indicates branch supply-pipes communicating with valve-castings 6, preferably two in
35 number, located on opposite sides of the car to supply its local heating-pipes. The valve-casting is provided with suitable controlling-valves—as, for example, a three-way valve—of any suitable and well-known construction
40 adapted to convey steam from the supply-pipe to one or both of the local heating-pipes 8 and 9, which communicate at one end with the interior of the valve-casting and terminate in drain-tips 10. The local heating-pipes are
45 plain straight pipes without special attachments of any sort, and in practice drain from one end of the car to the other. The drain-tips are constructed as illustrated in Fig. 3 of the drawings, in which 11 indicates a connect-

ing-piece, screw-threaded in suitable manner—for example, as illustrated for uniting the drain-tips to the local heating-pipes. The connecting-piece is provided with a conical interior wall 12. In practice the apex of the cone is upward, and is pierced with a small
55 aperture 13, an annular flange constituting an extension of the connection or body part 11 surrounding the cone, as illustrated.

14 indicates a screen made of suitable material—as, for instance, brass-wire cloth—supported by the annular flange at the apex of the conical wall and preventing closure of the aperture by waste material or dirt in the pipes.

The construction of the drain-tips above described reduces the liability to scale-clogging
65 to the minimum and insures the arrest of such debris as would interfere with their operation.

The operation of my device is as follows: Steam being admitted into the branch supply-pipes, the three-way valve is set as required to supply the local heating-pipes with
70 steam. The steam fills the pipes and its water of condensation is drained toward one end of the pipe, and is carried off through the drain-tips. By reason of the simplicity of my device the local heating-pipes may be made
75 free of all checking or reducing contrivance, and may be made to drain throughout their entire length in the simplest possible manner.

What I claim is—

A drain tip consisting of an internally screw threaded body part, an internal conical wall thereabove provided with an aperture at its apex, an externally threaded annular flange
85 surrounding the conical wall, and a screen sustained by the annular flange and covering the aperture in the conical wall, whereby the tip is readily detachable from the heating and drain pipes for cleansing, substantially as
90 specified.

In testimony of all which I have hereunto subscribed my name.

ROBERT MUNN DIXON.

Witnesses:

ROBT. P. BROWN,
OSCAR C. WHITNEY.