

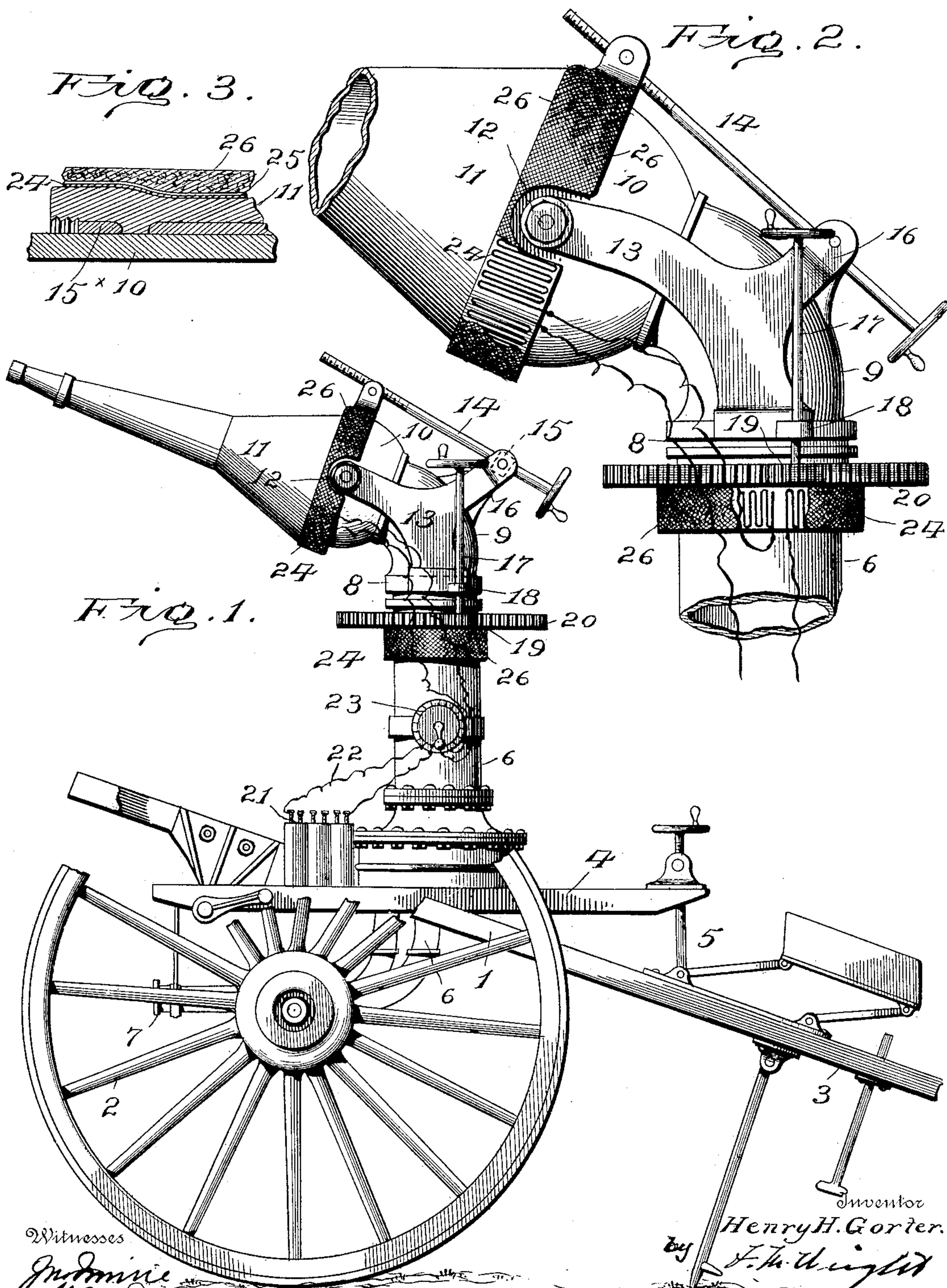
No. 637,507.

Patented Nov. 21, 1899.

H. H. GORTER.
MOVABLE WATER PIPE CONNECTION.

(Application filed Mar. 16, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY H. GORTER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO MARY E. GORTER, OF SAME PLACE.

MOVABLE WATER-PIPE CONNECTION.

SPECIFICATION forming part of Letters Patent No. 637,507, dated November 21, 1899.

Application filed March 16, 1899. Serial No. 709,294. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. GORTER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Movable Water-Pipe Connections, of which the following is a specification.

My invention relates to improvements in movable water-pipe couplings, the object of my invention being to provide an apparatus of this character which can be used in extremely cold weather without liability of the movable joint in the pipe sticking from freezing of the stagnant water in the interstices of the joint.

For the purpose of illustration I have shown my invention as applied to a portable fire-extinguishing apparatus, although it may also be employed with any other apparatus of which movable water-pipe connections form a part.

In the accompanying drawings, Figure 1 is a side elevation of a fire-extinguishing apparatus provided with my improvements. Fig. 2 is a similar view, on an enlarged scale, of the portion of the apparatus to which my invention is more particularly applied; and Fig. 3 is a section of a portion of a pipe-coupling of the fire-extinguishing apparatus to which my invention has been applied.

Referring to the drawings, 1 represents the frame of a portable water-battery, mounted on wheels 2 and having the shafts 3. In an opening in the frame is provided a platform 4, carried by pivoted links 5 on the frame 3, and on said platform is mounted a siamesing-pipe 6, supplied from beneath the platform 4 by the pipes 7. This construction of battery is the same as that of my Patent No. 613,368, of November 1, 1898, and is more explicitly shown and described in said patent.

In the upper end of the pipe 6 is revolubly mounted the pipe 8, carrying the curved section 9, the latter having the globular end 10. Upon said end 10 there rocks in a vertical plane the nozzle 11, pivotally mounted at 12 on the frame 13, revoluble with the pipe 8, said movement of the nozzle being controlled by a threaded rod 14, working in an internally-threaded block 15, pivoted on an extension 16 of said frame. The horizontal rotation of

the pipe 8 in the pipe 6 is controlled by a vertical shaft 17, working in bearings 18 on the frame 13 and carrying a pinion 19, meshing with a gear-wheel 20, carried by the pipe 6. Suitable packing is interposed between the pipes 6 and 8 and also between the globular end 10 and the nozzle 11. This construction of nozzle is the same as that of my Patent No. 557,799, of April 7, 1896, and is disclosed more in detail therein.

Upon the platform 4 are secured storage batteries 21, and wires 22 lead therefrom to a current-controller 23 and thence to electric heaters 24, surrounding the pivotal connection of the pipes 6 and 8 and the pivotal connection of the end 10 and the nozzle 11. Each heater is formed of a large number of turns of a fine wire of German silver or a similar high-resistance metal, and the wires of the heater are electrically separated from the metal pipe 6 by one or more sheets of mica 25 and are inclosed and protected from loss of heat by radiation by means of an asbestos covering.

In operation when in extremely cold weather the battery is brought out to be used at a fire the current from the storage batteries is immediately turned on, and the heat generated by the passage of said current through the high-resistance wires warms the movable water-pipe joints inclosed by the heaters, so that said joints are not liable to be rendered inoperative by the freezing of the stagnant water therein.

I claim—

1. The combination of an outer pipe-section, an inner section movable therein, insulating material surrounding the outer section, a high-resistance wire surrounding the insulating material, and means for supplying an electric current to said wire, substantially as described.

2. The combination of an outer pipe-section, an inner section movable therein, insulating material surrounding the outer section, a high-resistance wire surrounding the insulating material, material surrounding the wire adapted to prevent radiation of heat therefrom, and means for supplying an electric current to said wire, substantially as described.

3. The combination of a truck or carriage,
a pipe extending upwardly therefrom, means
for forcing water under pressure through said
pipe, a pipe-section movably carried on the
5 upper end of said pipe, a pipe-coupling con-
necting said pipe and pipe-section, a high-re-
sistance wire surrounding said pipe-coupling,
insulating material between said wire and
coupling, a non-conductor of heat on the op-
10 posite side of said wire to the insulating ma-
terial, means carried by said truck or carriage

for supplying an electric current, wires there-
from to the high-resistance wire, and a cur-
rent-controller on the truck, substantially as
described.

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In witness whereof I have hereunto set my
hand in the presence of two subscribing wit-
nesses.

HENRY H. GORTER.

Witnesses:

FRANCIS M. WRIGHT,
CHAS. W. SMYTH.