

(No Model.)

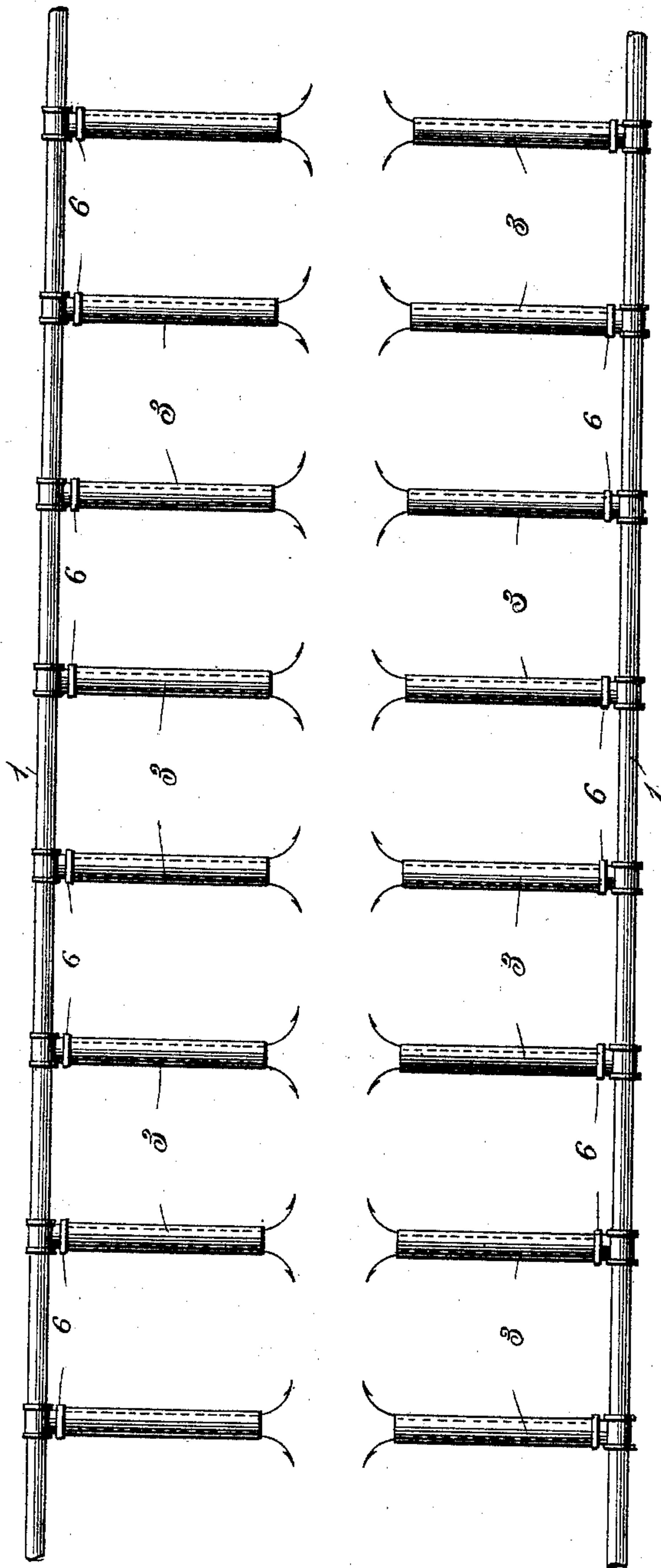
2 Sheets—Sheet 1.

R. QUAYLE.  
CAR HEATING DEVICE.

No. 497,252.

Patented May 9, 1893.

Fig. 1.



Witnesses  
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(No Model.)

2 Sheets—Sheet 2.

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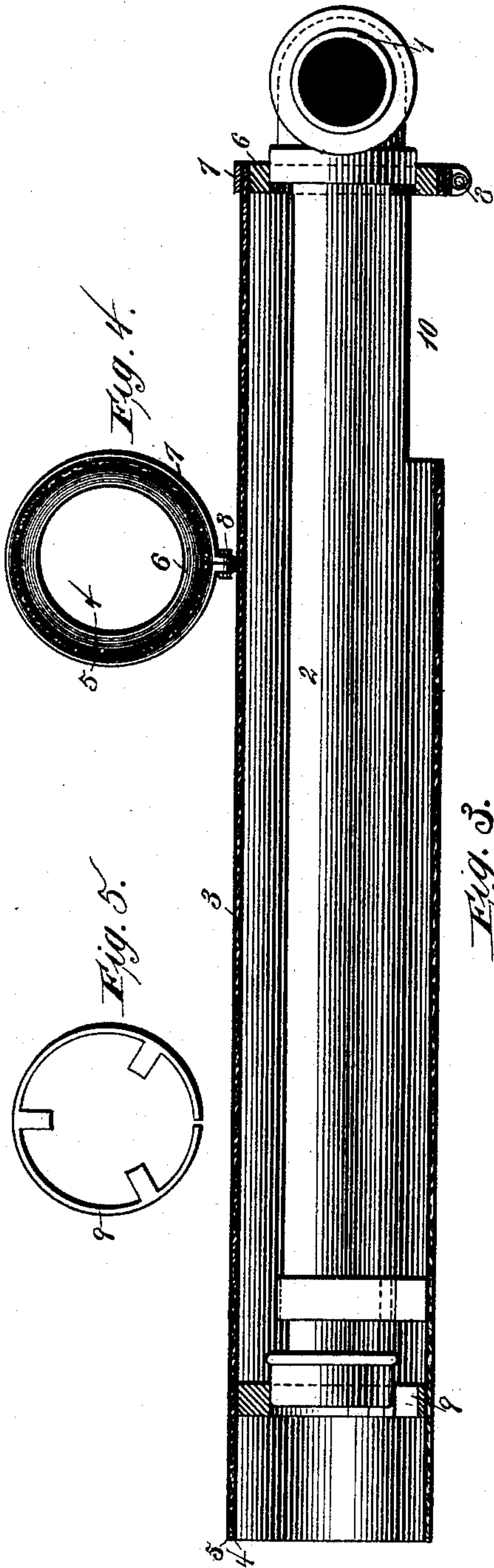


Fig. 3.

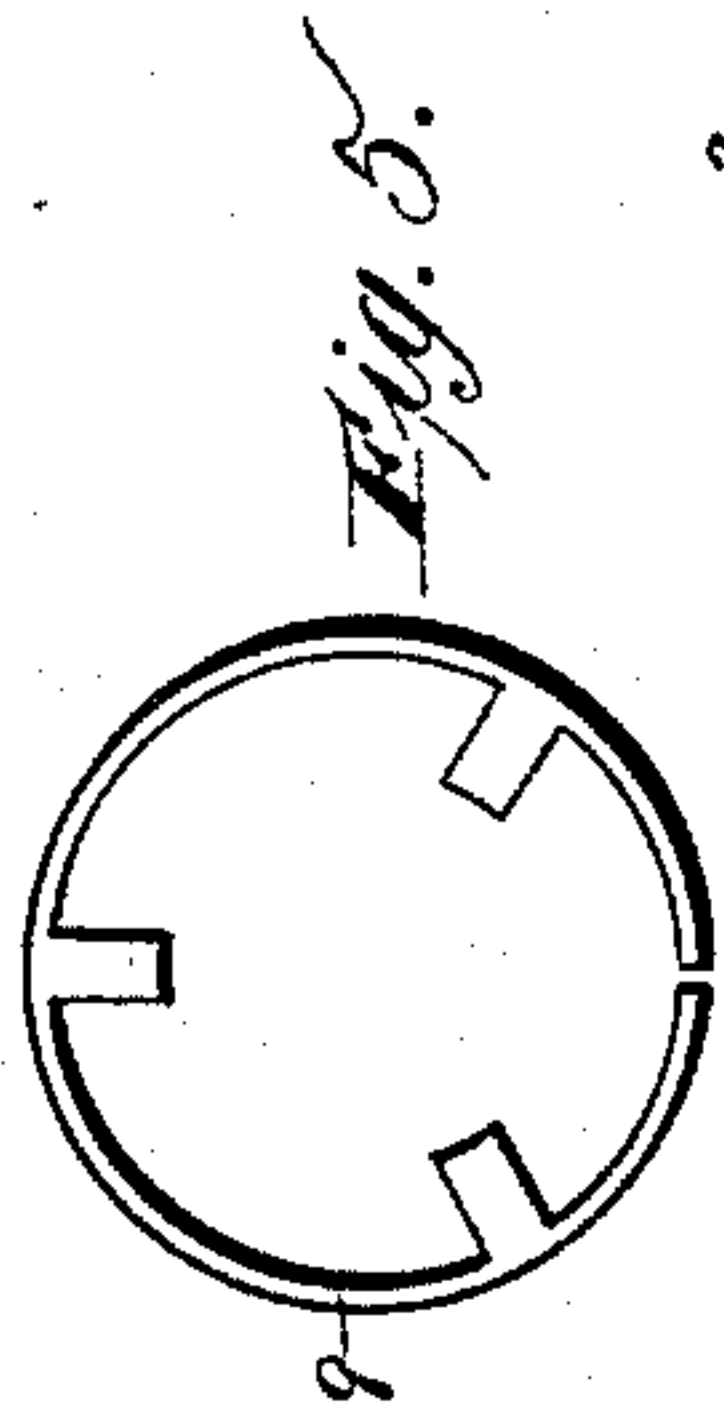


Fig. 5.

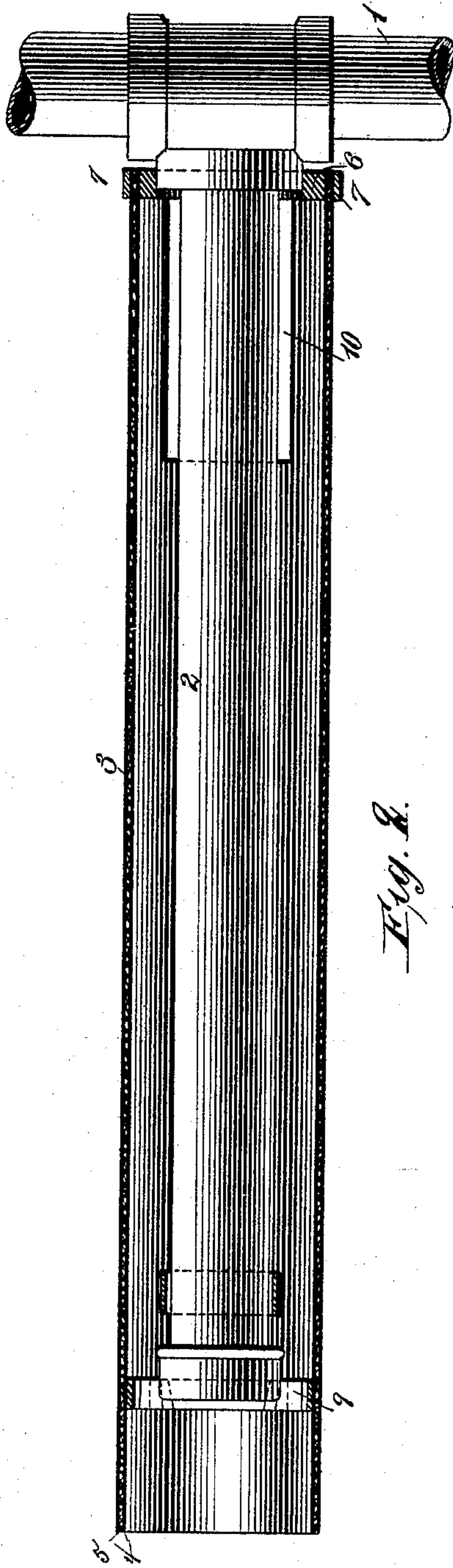


Fig. 2.

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# UNITED STATES PATENT OFFICE.

ROBERT QUAYLE, OF KAUKAUNA, WISCONSIN, ASSIGNOR TO THE SAFETY  
CAR HEATING AND LIGHTING COMPANY, OF NEW JERSEY.

## CAR-HEATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 497,252, dated May 9, 1893.

Application filed October 27, 1892. Serial No. 450,166. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT QUAYLE, of Kaukauna, county of Outagamie, State of Wisconsin, have invented certain new and  
5 useful Improvements in Car-Heating Devices, of which the following is a specification, reference being had to the accompanying drawings.

The object of my improvements is to provide in car heating systems means for preventing the radiation of heat in close and uncomfortable proximity to passengers' feet and for conducting it to the center of the car, from which point the greatest benefits of  
15 its radiation may result.

In the accompanying drawings, Figure 1 is a plan view of a section of heating pipes as arranged in a car, showing main pipes as if placed on opposite sides of a car, and spur  
20 pipes extending at regular intervals, as toward the aisle of the car. Fig. 2 is a plan view of one of the spur pipes, and a short section of the main pipes, and showing a covering for the spur pipe in section. Fig. 3 is a  
25 similar view to Fig. 2, showing a side elevation of the spur-pipe. Fig. 4 is a view of the collar for securing the cover to the spur-pipe at the end nearest the main pipe. Fig. 5 is a  
30 view of the collar adapted to be used at the opposite end.

Referring to the figures on the drawings, 1 indicates a main pipe which conveys a heating medium through a car. It may be a part of any suitable system, such as steam, hot  
35 water, hot air, or the like.

2 indicates a spur or branch pipe, which in use extends at right angles from the main pipe toward the aisle of the car, and which in practice is generally placed underneath a car  
40 seat. It is usual to provide a spur for each seat or pair of seats.

The above described parts are well known in the art and do not require further description.

45 Referring to what particularly constitutes my invention, 3 indicates a cover, preferably a little longer than the spur pipe, as illustrated in Figs. 2 and 3 of the drawings. This cover is composed of suitable non-conducting ma-

terial, as for instance asbestos. The asbestos  
50 may be inclosed to render it rigid and durable by inner and outer sheets of metal, 4 and 5. The best results are obtainable by the use of a cylindrical cover of considerably larger  
55 diameter than the spur pipe for which it is adapted, so as to leave ample air space between the spur pipe and its non-conducting cover. Good results, however, might be obtainable  
60 by the use of a semi-cylindrical cover or shield which would in a measure prevent the radiation of heat in proximity to passengers' feet, but would not conduct all of it  
toward the middle of the car, which I regard as a valuable feature of my invention.

For carrying the cover upon the pipe, I  
65 prefer to use two collars, one a continuous band 6, adapted to fill the space between the pipe and the cover and to completely close it. Around the outside of the cover and  
70 this collar I provide a split band 7 whose ends may be secured by a bolt and nut 8. At the opposite end I provide a tripod collar 9 which carries the cover concentrically with  
75 the pipe and allows free space for the passage of air through it. On the under side of the cover, next to the the main pipe, I provide an opening 10 to give free access of air  
to the interior of the cover.

The operation of my device is as follows: The pipes being in position, air is admitted  
80 to the interior of the cover through the opening 10 where it is heated by the pipe therein, passed along through the cover, and discharged from the open end of the cover into  
85 the aisle of the car, thereby preventing disagreeable radiation of heat underneath the seats, and distributing it equally throughout the car.

What I claim is—

1. The combination with a pipe of a car  
90 heating system, of a non-conducting cover, a closed collar for securing it at one end to the pipe, an open collar for holding it separate therefrom near the other end, and an air opening next the closed collar, substantially as set forth.

2. In a system of heating cars, the combination with a main pipe, of spur or branch

pipes projecting therefrom at suitable intervals, coverings composed of non-conducting material surrounding the spur-pipes and separated therefrom by suitable air space,  
5 and adapted to discharge the heat generated by the spur pipes from one end of the cover, substantially as set forth.

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

ROBERT QUAYLE.

Witnesses:

OLAF OLSON,  
FRANK SLATER.