

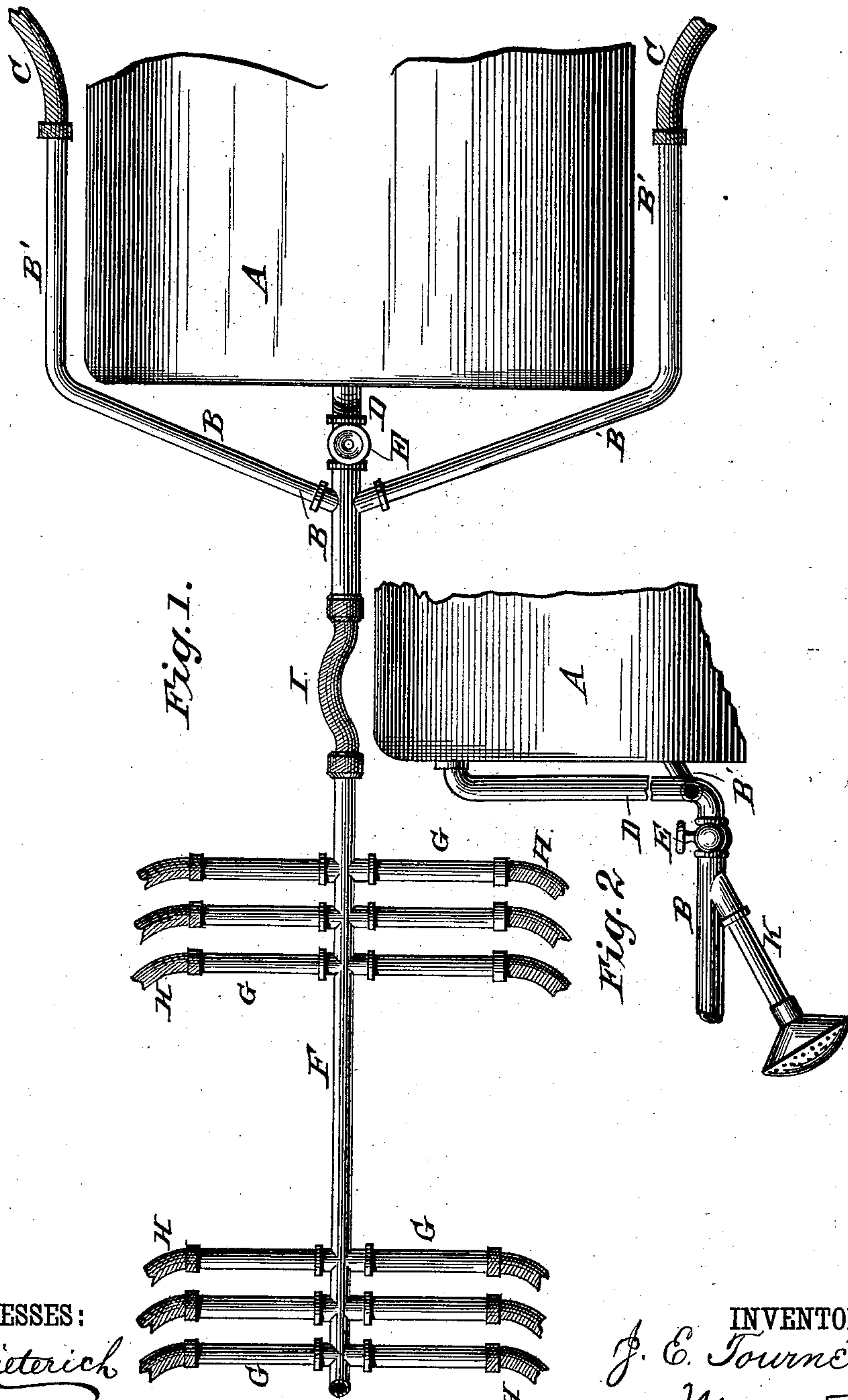
(No Model.)

J. E. TOURNÉ.

APPARATUS FOR COOLING CAR AXLE BOXES.

No. 360,978.

Patented Apr. 12, 1887.



WITNESSES:  
*Fred G. Dieterich*  
*John Kernan*

INVENTOR:  
*J. E. Tourné*  
BY *Munn & Co*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JÉROME EUGÈNE TOURNÉ, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF  
ONE-THIRD TO JULES VICTOR CHARPANTIER, OF SAME PLACE.

## APPARATUS FOR COOLING CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 360,978, dated April 12, 1887.

Application filed September 2, 1886. Serial No. 212,553. (No model.)

*To all whom it may concern:*

Be it known that I, JÉROME EUGÈNE TOURNÉ, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Apparatus for Cooling Car-Axle Boxes, of which the following is a specification.

My invention consists in an improved apparatus, which will be hereinafter fully described and claimed, for cooling and preventing fire in car-axle boxes of railroad-cars by the utilization of the exhaust-steam from the steam-cylinders of the locomotive, and also by a powerful flow of steam direct from the boiler when required.

Referring to the accompanying drawings, Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a detail of a modification.

Referring to the several parts by letter, A indicates the boiler of a locomotive of ordinary construction.

B indicates the main pipe, which is supported in a suitable position on the locomotive, its two branches, B'B', extending on each side of the boiler, being flexibly connected at their forward open ends by means of rubber or other flexible tubes, C C, with the exhaust-outlets of the steam-cylinders of the locomotive. The main pipe B is also connected directly to the boiler by a connecting-pipe, D, having a stop-cock, E, which may be opened to admit the steam direct from the boiler into the main pipe.

F indicates the sections of the main pipe A, which are secured beneath the several cars of a train, one beneath each car, and G indicates lateral branch pipes, which extend from the pipes F near each end of the same, and lead to or within the car-axle boxes, as the construction of the latter may render desirable, the ends of the lateral pipes G communicating with the axle-boxes through flexible couplings H. The forward part of the main pipe, which is secured on the locomotive and its several sections beneath the different cars, are connected one to the other by flexible couplings I between the locomotive and the several cars, so that the cars may be readily separated, when required, without any further disturbance to

the apparatus than the uncoupling of the flexible couplings of the pipes between the cars.

It will be seen that the waste or exhaust steam from the two steam-cylinders of the locomotive will continually pass through the several sections of the main pipe when the latter have been coupled together, and will pass through the lateral pipes G into each of the car-axle boxes of the train, the steam when entering these boxes being nearly at the point of condensation; and it will be seen that the steam will thus effectually maintain the temperature in the boxes at a point below that at which there is danger of ignition, thus entirely preventing "hot boxes" or conflagrations, and serving also as a lubricant.

When required, the stop-cock E may be opened, thus sending a powerful flow of steam direct from the boiler through the pipes and into the several axle-boxes to lower the heat of any box that might become overheated when running at a high rate of speed.

The main pipe may also have a discharge-pipe, K, in the form of a sprinkler, near the stop-cock E, which may utilize the steam to destroy grass or weeds growing on the track.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my improved apparatus will readily be understood. It will be seen that it is very simple in construction, while at the same time it is very efficient in its operation. The waste steam is utilized to cool the axle-boxes and prevent ignition, while a powerful flow of steam may be thrown through the pipes direct from the boiler when required.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a locomotive, of the main pipe having the forward branches communicating with the exhaust-outlets of the steam-cylinders thereof and the sections connected together by the flexible couplings, and having the lateral pipes communicating with each of the car-axle boxes, substantially as and for the purpose herein set forth.

2. The combination, with a locomotive, of the main pipe having the forward branches

communicating with the exhaust-outlets of the steam - cylinders thereof, communicating directly with the boiler through the connecting-pipe having the stop cock, and the sections  
5 connected together by the flexible couplings, and having the lateral pipes communicating with each of the car-axle boxes, substantially as and for the purpose herein set forth.

3. The combination, with a locomotive, of  
10 the main pipe having the forward branches communicating with the exhaust-outlets of the steam - cylinders thereof, communicating directly with the boiler through the connecting-pipe having the stop-cock, the discharge-pipe  
15 in the form of a sprinkler, and the sections connected together by the flexible couplings, and having the lateral pipes communicating

with each of the car-axle boxes, substantially as and for the purpose herein set forth.

4. The combination, with a locomotive, of 20  
the main pipe having the forward branches communicating through flexible pipes with the exhaust-outlets of the steam-cylinder, communicating directly with the boiler through  
the connecting-pipe having the stop-cock, and 25  
the sections connected together by the flexible couplings, and having the lateral pipes communicating through the flexible couplings with each of the car-axle boxes, substantially as and for the purpose herein set forth.

JÉROME EUGÈNE TOURNÉ.

Witnesses:

GEO. A. WAGATHA,  
F. LAPLANTE.