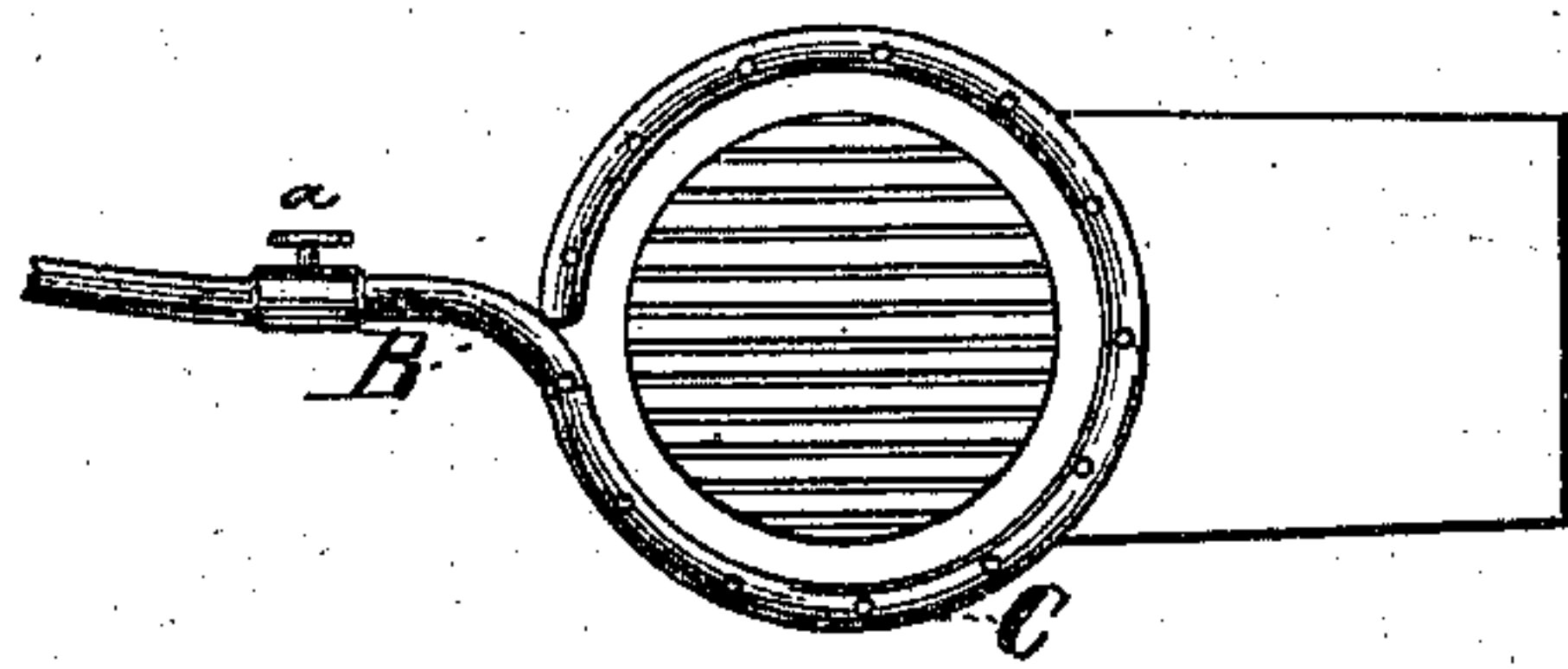
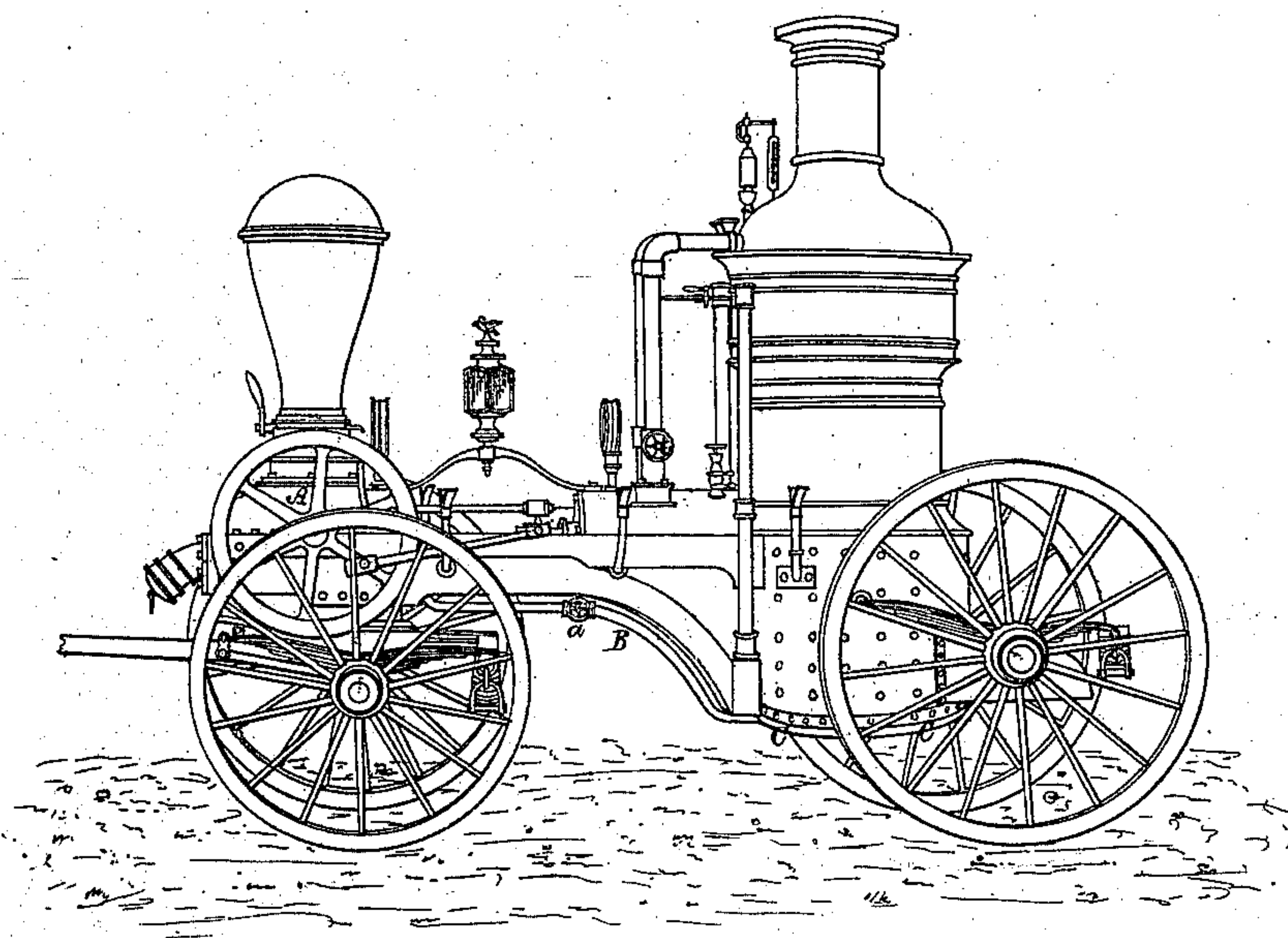


W. C. DAVOL, Jr.
Steam Fire-Engines.

No. 143,750.

Patented Oct. 21, 1873.



Witnesses.

S. W. Piper
L. N. Hölles

Wm. C. Davol, Jr

by his attorney.

R. H. Ledy

UNITED STATES PATENT OFFICE.

WILLIAM C. DAVOL, JR., OF FALL RIVER, MASSACHUSETTS.

IMPROVEMENT IN STEAM FIRE-ENGINES.

Specification forming part of Letters Patent No. **143,750**, dated October 21, 1873; application filed August 27, 1873.

To all whom it may concern:

Be it known that I, WILLIAM C. DAVOL, JR., of Fall River, of the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Steam Fire-Engines; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, which exhibits a perspective side elevation of a steam fire-engine provided with my addition or invention.

Most if not all such engines have upright boilers, and, while at work, discharge the ashes and cinders of the fire-place directly upon the ground or pavement underneath the boiler, and between the next adjacent wheels of the carriage, in consequence of which the said wheels are very liable to become scorched, smoked, or burned more or less. To avoid the injurious effects of the heat of the waste coals and ashes, resort has generally been had to plates of iron or metal, or to boards set up against the inner sides of the wheels, so as to intercept the heat and smoke, and deflect such. The object of my invention is to prevent such injurious results to the wheels from the heat of the waste products of combustion of the furnace; and for such purpose I extend from the waste-educt or eduction-chest A of the engine, a pipe or conduit, B, to open into a tubular ring, C, arranged horizontally underneath the boiler, or below and around

the passage by which the ashes and coals escape from the furnace to the ground, such ring C being perforated with numerous holes, so arranged as to cause, while the engine may be at work, water to be discharged directly upon the spent products of combustion on the ground, and also about such and upon the wheels where they may be liable to be injured by the heat.

By such means the wheels may be effectually protected from the heat and smoke, and all necessity of deflectors is overcome. To the conduit B I usually apply a cock provided with a hand-wheel, *a*, such being to regulate the discharge of water from the pipe or ring. Thus, while the engine may be forcing water from the educt, or there may be water under pressure in the fountain or chest, part of such water may be thrown or discharged into and through the ring.

What, therefore, I claim as my invention is—

The combination of the conduit B and foraminous or perforated ring C with the fire-box of a steam fire-engine, all being substantially as set forth, and for the purpose of protecting its wheels, as specified.

WM. C. DAVOL, JR.

Witnesses:

R. H. EDDY,
J. R. SNOW.