

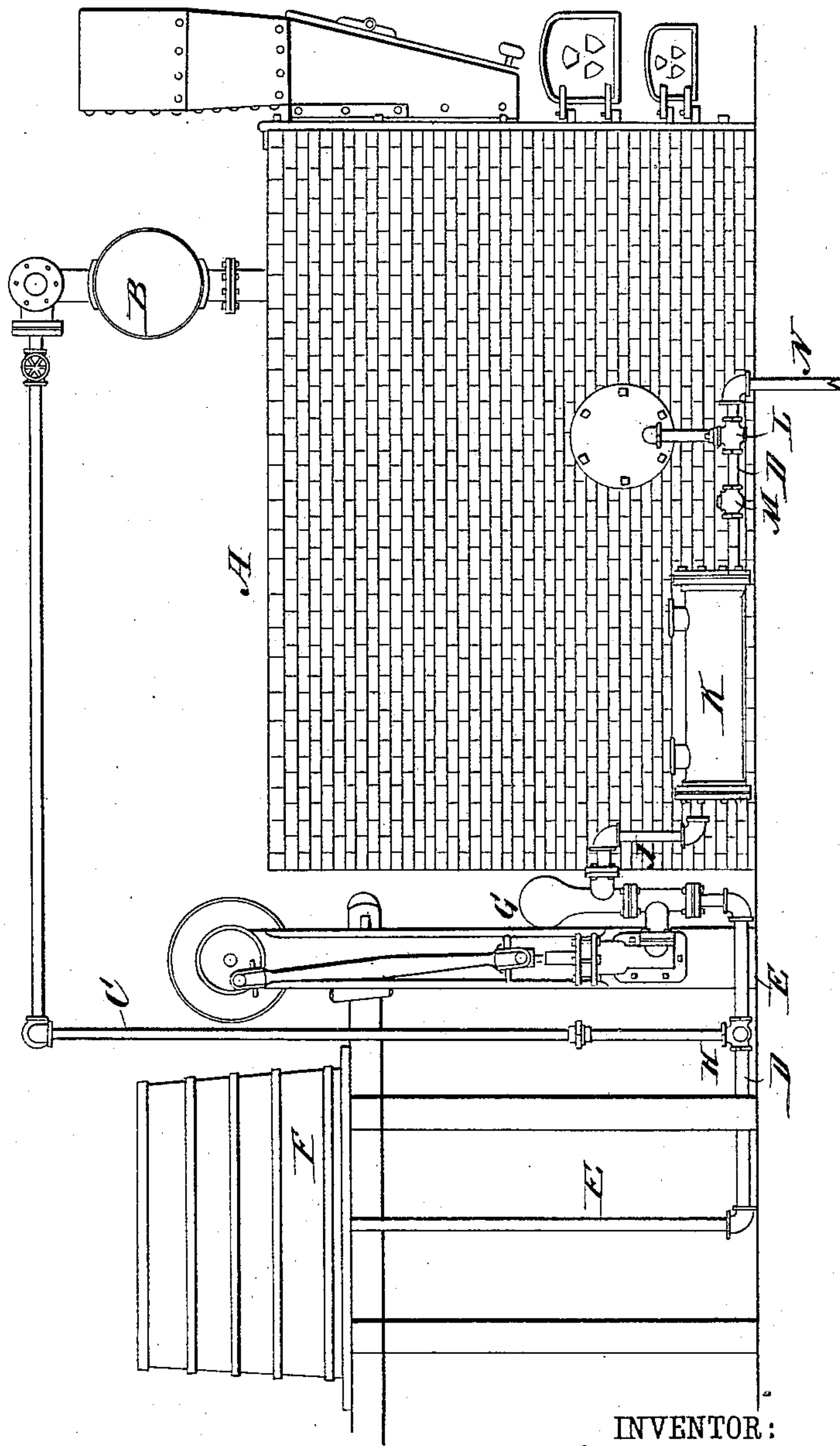
(No Model.)

C. KYNOCH & E. COURTRIGHT.

APPARATUS FOR CLEANING STEAM PIPES.

No. 345,434.

Patented July 13, 1886.



WITNESSES:

*Wm Mc Ardle.*  
*C. Sedgwick*

INVENTOR:

*C. Kynoch*  
*E. Courtright*  
BY *Munn & Co*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES KYNOCH AND EDGAR COURTRIGHT, OF ST. IGNACE, MICHIGAN.

## APPARATUS FOR CLEANING STEAM-PIPES.

SPECIFICATION forming part of Letters Patent No. 345,434, dated July 13, 1886.

Application filed January 2, 1886. Serial No. 187,490. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES KYNOCH and EDGAR COURTRIGHT, both of St. Ignace, in the county of Mackinac and State of Michigan, have invented a new Apparatus for Cleaning Steam Pipes, Heaters, Pumps, &c., of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved apparatus for cleaning steam pipes and pumps and removing the dirt and sediment in dry-pipes, &c., and to prevent freezing without taking the pipes apart.

The invention consists in the combination, with a boiler-pump and feed-water heater, of a pipe connecting the boiler with the pipe leading from the tank or well to the feed-pump, and of a three-way cock uniting the said pipes.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which a side view of a boiler, feed-water tank, pump, and heater are shown provided with our improvement.

On the boiler A the dome B is provided, from which the pipe C leads to the pipe E, which connects the feed-water tank F with the pump G, the pipes C and E being connected by a three-way cock, H. The pump G is connected by a pipe, J, with the feed-water heater K, which in turn is connected by the pipe D with the boiler. L is a three-way

cock, M a check-valve, and N a waste-pipe. The feed-water is pumped from the tank F through the pipe E and the heater K into the boiler.

To clean the pipe E the three-way cock H is turned in such a manner that the dry steam passes through the pipe E and cleans the same.

When the pump G, the pipe J, the heater K, and the pipe D are to be cleaned, the three-way cock is turned in such a manner that the dry steam passes through them. The dry steam passing through the pipes cleans them and carries off and blows out all the dirt, smut, and sediment very rapidly without requiring any of the parts being detached or taken apart.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination, with a boiler, of the pipe E, connecting the tank or well with the feed-pump and feed-water heater, the pipe C, connecting the boiler with the pipe E, and the three-way cock H at the connection of the pipes C and E, substantially as herein shown and described.

CHARLES KYNOCH.  
EDGAR COURTRIGHT.

Witnesses:

EUSTACHE LA ROCQUE,  
J. J. NUNN.