

No. 860,449.

PATENTED JULY 16, 1907.

C. E. CURRIER.
CONDENSER.

APPLICATION FILED SEPT. 26, 1906.

Fig. 1.

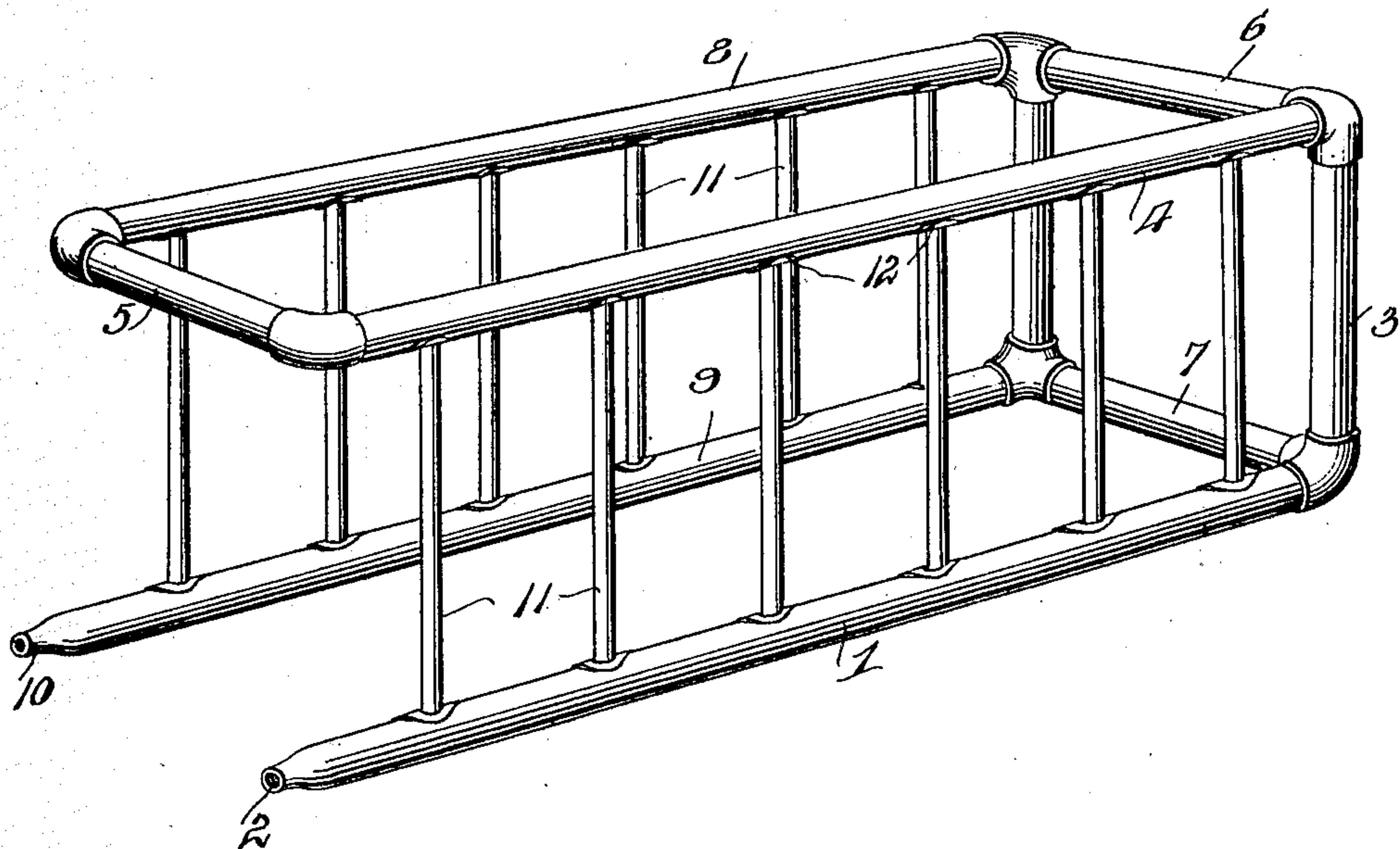
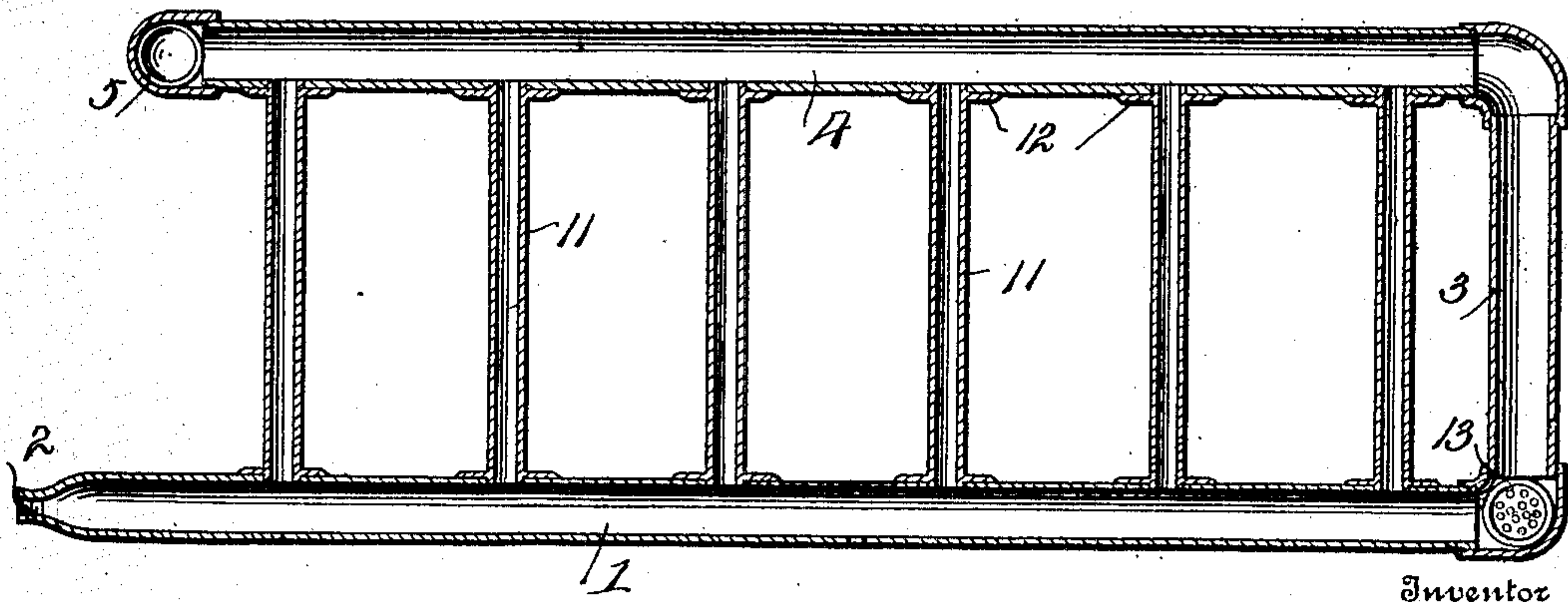


Fig. 2



Inventor

Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES E. CURRIER, OF BUFFALO, NEW YORK.

CONDENSER.

No. 860,449.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed September 26, 1906. Serial No. 336,308.

To all whom it may concern:

Be it known that I, CHARLES E. CURRIER, a citizen of the United States of America, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Steam-Condensers, of which the following is a specification.

This invention relates to steam condensers and one of the principal objects of the same is to provide a simple and efficient device to receive the exhaust steam from an engine and to quickly condense the same and to return the water of condensation to the boiler.

Another object of my invention is to provide a simple, inexpensive, reliable and efficient device for condensing exhaust steam and permitting the water of condensation to drop into a receptacle for future use in the boiler.

Still another object of the invention is to provide means for preventing exhaust steam from being condensed in the open air and dropping upon passers by.

These and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of a steam condenser made in accordance with my invention. Fig. 2 is a sectional view taken through one side or leg of the condenser.

Referring to the accompanying drawing for a more particular description of my invention, the numeral 1 designates a pipe having a threaded opening 2 for connection to an exhaust pipe of a stationary or other engine. Connected to one end of the pipe 1 is a pipe 3 which extends upward and has connected thereto a branch pipe 4 disposed parallel to the pipe 1 and having connected thereto at its front end a cross pipe 5. Similar cross pipes 6 and 7 connect the pipes 1 and 4 with parallel branches 8 and 9, the pipe 9 being an outlet pipe for the waters of condensation, said pipe having a reduced nozzle or outlet 10, through which

the waters of condensation are passed and drop into a suitable receptacle for reuse in the boiler. Copper cooling tubes 11 extend from the pipe 1 to the pipe 4, said pipes 11 having flanged ends 12 fitting into said pipes 1 and 4, as shown in Fig. 2 of the drawings. Similar pipes 11 are fitted to the pipes 8 and 9. In the cross pipe 7 a disk 13 provided with a series of perforations, is fitted, said disk occupying a substantially central position in said pipe.

The operation of my invention may be briefly described as follows: The inlet end 2 of the condenser is connected to the exhaust pipe of an engine and the exhaust steam passes through pipe 1 and up through pipes 11 or through pipes 11 and pipe 3 to the upper branches 4, 5 and 6 from which the water of condensation passes to pipe 8 and drops through the cooling tubes 11 upon that side of the condenser and pass out through pipe 9 and its nozzle 10. The disk 13 serves as a deflector to prevent the steam from reaching the pipe 9 until the steam has been condensed through the pipes 4, 5, 6, and 8.

From the foregoing it will be obvious that a condenser made in accordance with my invention is of simple construction; can be manufactured at slight cost; can be readily placed upon the top of a building to receive exhaust steam; which will quickly condense the same and run off the waters of condensation.

Having thus described my invention, what I claim is:

A condenser comprising a rectangular device composed of pipes arranged in parallel relation, and a series of cooling tubes connecting said pipes and communicating therewith, and a perforated deflector disk in one of the cross pipes, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

CHARLES E. CURRIER.

Witnesses:

BENJAMIN A. TALBOT,
JOSEPH WEST.