

(No Model.)

L. STEWART.
SEPARATOR.

No. 327,735.

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Fig. 1.

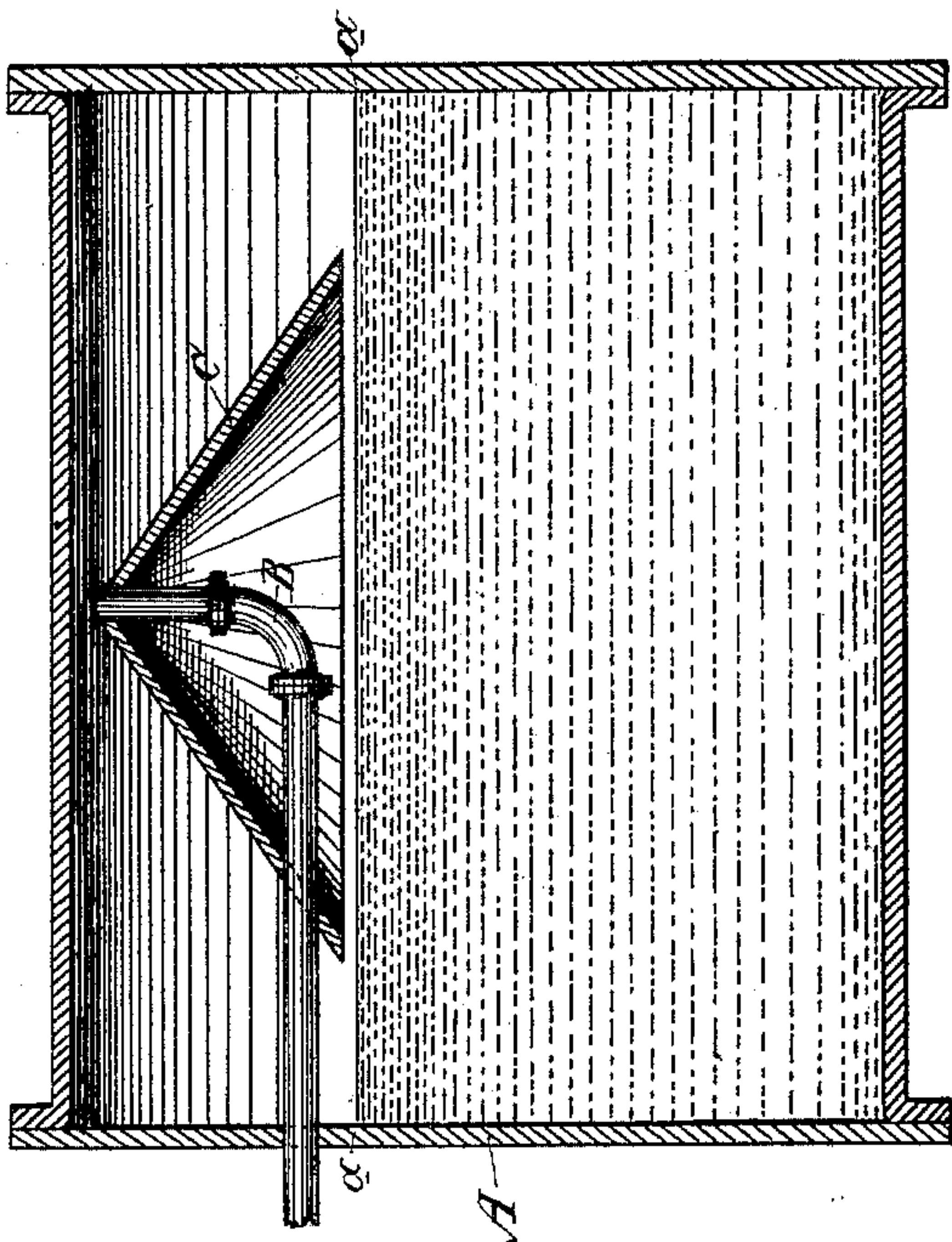
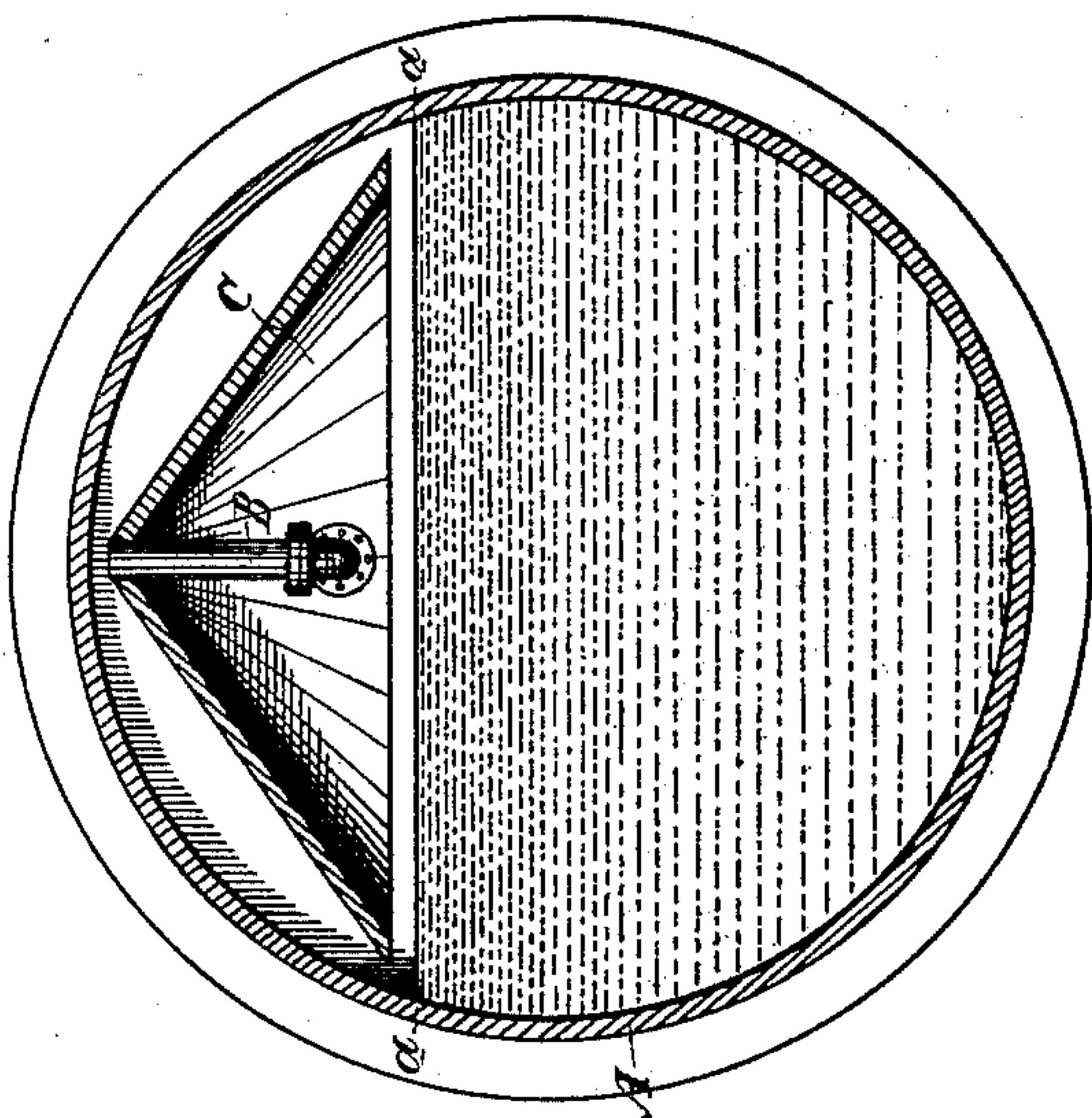


Fig. 2.



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To all whom it may concern:

Be it known that I, LINUS STEWART, of the city and county of San Francisco, State of California, have invented an Improvement in Separators; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of boilers and to a new and useful improvement therein; and it consists in a plate or shield within the boiler and directly below the entrance of the exit steam-pipe, as I shall hereinafter describe.

The object of my invention is to draw dry steam directly from the boiler.

Referring to the accompanying drawings, Figure 1 is a longitudinal section of a boiler, showing my attachment. Fig. 2 is a transverse section of the same.

A is a boiler, in which the water-line is designated by *a a*. B is the pipe by which the steam is withdrawn from the boiler. It will be observed that it enters the boiler and then turns upwardly to near its top. Upon this steam-pipe is supported the shield C. This is here shown to be of a conical or inverted funnel shape, though I do not wish to confine myself entirely to this shape; but I deem it preferable. When the water in the boiler is foaming and steam is being drawn from it by a pipe which is simply let into the boiler, the rush of steam toward the exit is such that the water rises or lifts, being highest in its center, and the steam is necessarily drawn out in a wet condition; but by having the shield C this lifting of the water in the vicinity of the exit-pipe is prevented, and none but dry steam is taken out, because of the protection afforded the entrance of the pipe.

As I have before said, while I deem the conical-shaped shield the best for the purpose, still

a flat plate might be used, though not perhaps with as good results. The upward turn on the end of the steam pipe is also beneficial in this connection in not drawing the steam directly off the water, but making it take a more tortuous course to reach the exit, so that the water is not so likely to go with it.

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

1. In a boiler, the combination of an exit steam-pipe, having its upturned end inclosed by the boiler, and a shield or protecting-plate supported by the pipe and lying in close proximity to the water in the boiler, substantially as set forth.

2. In a steam-boiler, the combination of the exit steam-pipe B, the upturned end of which is inclosed by the boiler, with the conical or inverted funnel-shaped shield secured on the exit-pipe below its top, substantially as herein described.

3. In a steam-boiler, the combination of a steam exit-pipe, entering and projecting within the boiler, and an independent protecting shield or plate having a central perforation, through which the end of the pipe tightly passes, the said shield or plate lying between the end of the pipe and the water and in close proximity to the latter, all constructed and operating as herein described.

In witness whereof I have hereunto set my hand.

LINUS STEWART.

Witnesses:

S. H. NOURSE,
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