

No. 656,989.

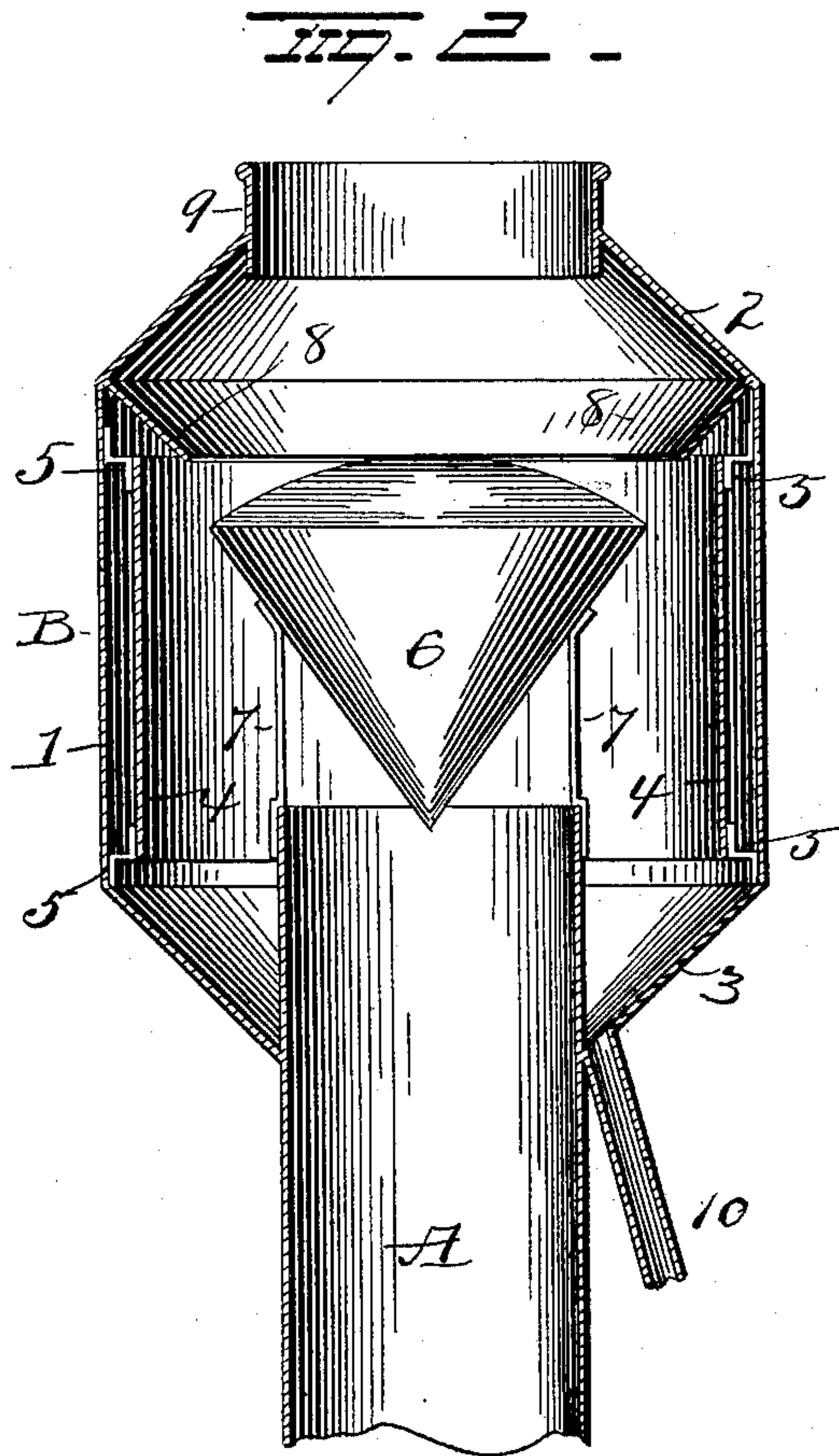
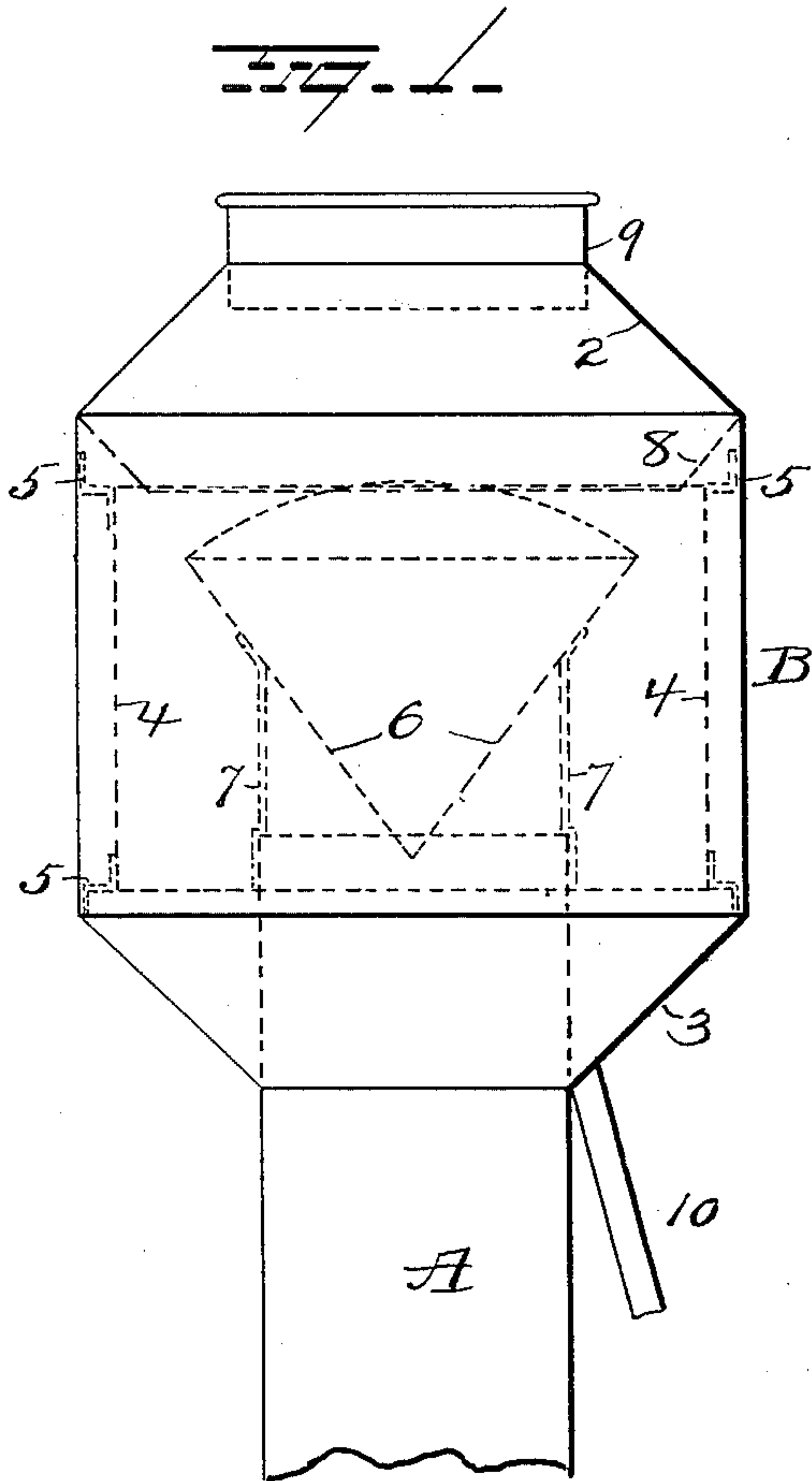
Patented Aug. 28, 1900.

F. MARANVILLE & W. WARDEN.

EXHAUST HEAD.

(Application filed Feb. 24, 1900.)

(No Model.)



WITNESSES
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UNITED STATES PATENT OFFICE.

FRANK MARANVILLE AND WILLIAM WARDEN, OF AKRON, OHIO.

EXHAUST-HEAD.

SPECIFICATION forming part of Letters Patent No. 656,989, dated August 28, 1900.

Application filed February 24, 1900. Serial No. 6,416. (No model.)

To all whom it may concern:

Be it known that we, FRANK MARANVILLE and WILLIAM WARDEN, residents of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Exhaust-Heads; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improved exhaust-head for steam-exhaust pipes, the object of the invention being to provide a device of the above-mentioned character which will effectually recover all water, oil, and grease which the exhausting steam may contain.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation illustrating our improvements, and Fig. 2 is a view in section of the same.

A represents a steam-exhaust pipe, and B our improved exhaust-head secured thereon. The exhaust-head B comprises a cylindrical casing 1, contracted at its upper and lower ends, as shown at 2 and 3, and provided in its cylindrical portion with a sleeve or partition-wall 4 of slightly-less diameter than the casing and spaced therefrom and supported by suitable braces 5. A conical deflector 6, closed at its top, is supported centrally in the sleeve or partition-wall 4 by means of braces 7 and is disposed above the steam-pipe A, and the cylindrical casing is provided above the upper edge of the sleeve or partition-wall 4 with an inclined separator-ring 8, and a ring 9 is mounted in the upper contracted end of the casing and projects down thereinto for a purpose more fully hereinafter explained. The lower contracted portion 3 of the casing is provided with an outlet-spout 10, adapted to convey the water and oil to a suitable receptacle therefor, and the steam-pipe A preferably projects up into the casing a suitable distance to prevent any pos-

sibility of the return of the water and oil thereinto.

The operation of our improvements is as follows: The exhaust-steam which contains water and oil passes up the pipe A and strikes the deflector 6 and is deflected against the sleeve or partition-wall 4, and the water and oil which are thereby separated from the steam pass down and out the spout 10. The steam is next forced against the under face of the separator-ring 8, and the water and oil drop down between the partition-wall 4 and casing 1, and the steam will next strike the separator-ring 9, which latter projects down into the casing and forms a shoulder to stop the upward passage of any remaining water and oil the steam may contain.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of our invention, and hence we do not wish to limit ourselves to the precise details set forth, but consider ourselves at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of our invention.

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

1. In an exhaust-head, the combination with a casing and a steam-pipe projecting through and terminating above the lower end of the casing, of a deflector or condensing-wall within the casing and spaced inwardly from the wall thereof and terminating at its lower end below the upper end of the steam-pipe, an inclined deflector-ring overhanging the annular space between said deflector or condensing-wall and the wall of the casing, and a conical deflector disposed over and supported by the steam-pipe, the wall of said conical deflector being approximately in line with said inclined deflector-ring, and an outlet at the lower end of said casing.

2. An exhaust-head comprising an approximately-cylindrical casing contracted at its upper and lower ends, a steam-pipe projecting into the lower contracted end of the casing, a sleeve or partition-wall in said casing and spaced therefrom, an inclined separator-ring secured in said casing above the parti-

tion-wall, a conical deflector above the steam-
pipe and adapted to deflect the steam against
the separator-ring, another separator-ring in
the upper contracted end of the casing and
5 projecting down thereinto and an outlet-
spout communicating with the lower con-
tracted end of said casing.

In testimony whereof we have signed this

specification in the presence of two subscri-
ing witnesses.

FRANK MARANVILLE.
WILLIAM WARDEN.

Witnesses:

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