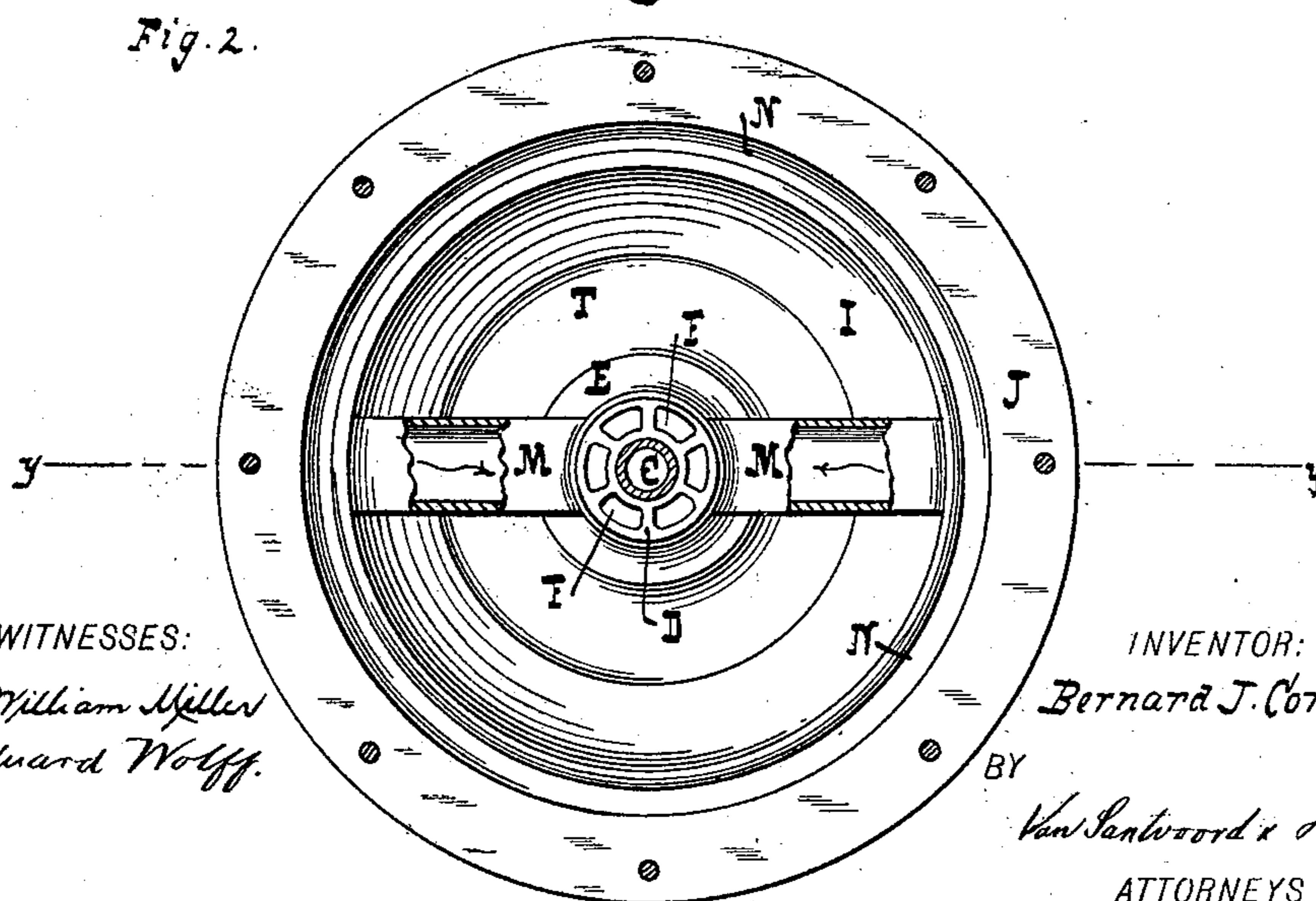
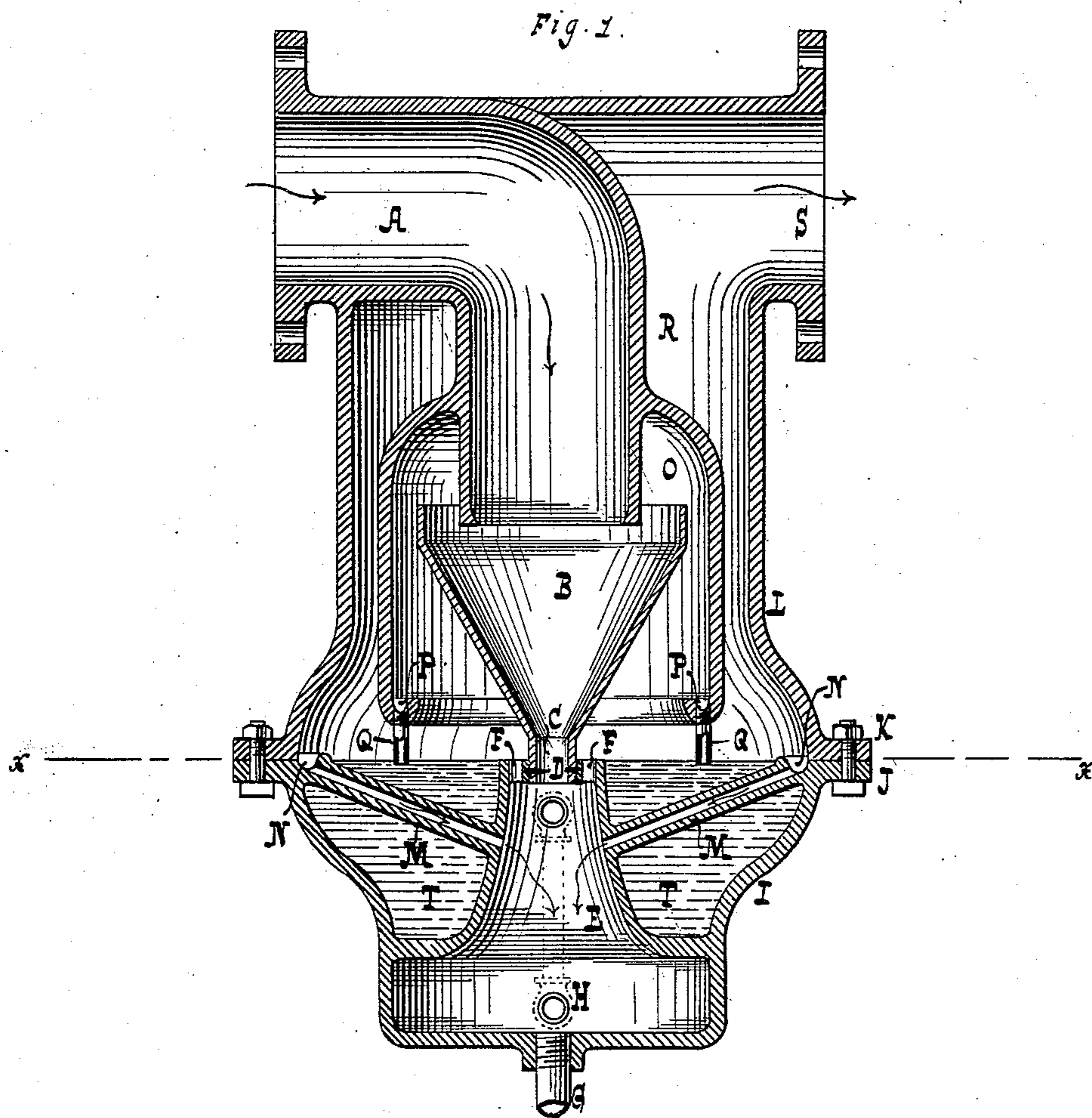


(No Model.)

B. J. CORCORAN.  
SEPARATOR.

No. 415,093.

Patented Nov. 12, 1889.



WITNESSES:

William Miller  
Edward Wolff.

INVENTOR:

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BY

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ATTORNEYS

# UNITED STATES PATENT OFFICE.

BERNARD J. CORCORAN, OF NEW YORK, N. Y.

## SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 415,093, dated November 12, 1889.

Application filed September 26, 1889. Serial No. 325,137. (No model.)

*To all whom it may concern:*

Be it known that I, BERNARD J. CORCORAN, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Oil-Separators, of which the following is a specification.

This invention relates to apparatus for separating from steam the oil and grease and other matters which may be carried along by the steam from an engine-cylinder or other source; and it consists in certain novel features and combinations which are described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of a vertical section of my invention, taken on the line *yy* of Fig. 2. Fig. 2 is a horizontal section taken on the line *xx* of Fig. 1.

Similar letters indicate corresponding parts.

The letter A designates a pipe through which passes the exhaust-steam from an engine, said pipe extending into and terminating near the upper end of an open funnel-shaped chamber B, whose lower and smaller end C is of cylindrical form and screws into the hub of a perforated diaphragm or spider D, which is secured in the upper end of the conical receiver E. The perforations or openings F of the spider are shown in Fig. 2 of the drawings, and in part in Fig. 1. The bottom of the receiver E is provided with a discharge-pipe G, which is to be provided with a stop-cock or valve, (not shown,) and in the sides of the receiver are secured the ends of a gage H, as indicated in Fig. 1. The upper part of the receiver E is surrounded by a shell I, having around its upper edge a flange J, which is bolted to the bottom flange K of the upper shell L. The joint between the flanges is made steam-tight. The receiver E is provided with lateral open tubes M, two or more in number, which extend from its sides to the upper edge of the shell I, where they open into an open trough N, formed along the inner circumference of

shell I. The upper edge of trough N is about on a level with the upper end of receiver E.

From the sides of pipe A, near its lower end, proceeds a hood O, which extends downward nearly to the lower end of funnel B. The lower end of the hood is open, and along its inner circumference there is formed an open trough P, from which extend discharge-pipes Q Q, two or more in number. The shell L surrounds the pipe A and hood O and forms a chamber R, from the upper part of which proceeds the steam-escape pipe S.

The space T between the outer sides of the receiver E and the shell I forms a water-space, through which extend the tubes M, before mentioned.

The operation of the apparatus is as follows: The steam passes through exhaust-pipe A in the direction of the arrow and into the funnel B, coming against the inclined sides of the funnel, whereby the oil and other matter which is carried along by the steam becomes disengaged therefrom and runs down the sides of the funnel into the receiver E. The steam passes over the top of the funnel, and thence downward through the hood O until it reaches the surface of the water contained in the water-space T, the oil which has not already left the steam and passed into the receiver collecting on the surface of the water, and flowing thence into the receiver through the trough N, pipes M, and openings F, while the oil which attaches itself to the inner walls of the hood O runs into the trough P, and flows thence through pipes Q into the water-space T. The steam finally escapes through the escape-pipe S.

What I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for separating oil and grease from steam, consisting of a shell I, having the receiving-chamber E open at its upper end and provided at its lower portion with a discharge-pipe G, a funnel B, having its lower small end opening into the upper end of the receiving-chamber, and an exhaust-

steam pipe A, depending into the upper larger end of the funnel, substantially as described.

2. The combination of the steam-pipe A,  
5 funnel B, receiver E, shell I, water-space T, trough N, and pipes M, extending from the receiver to the trough, substantially as described.

3. The combination of the steam-pipe A,

the funnel B, receiver E, hood O, trough P, 10 and pipes Q, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BERNARD J. CORCORAN.

Witnesses:

W. HAUFF,

J. VAN SANTVOORD.