

(No Model.)

D. COCHRANE.
SEPARATOR FOR STEAM.

No. 483,992.

Patented Oct. 11, 1892.

Fig. 1.

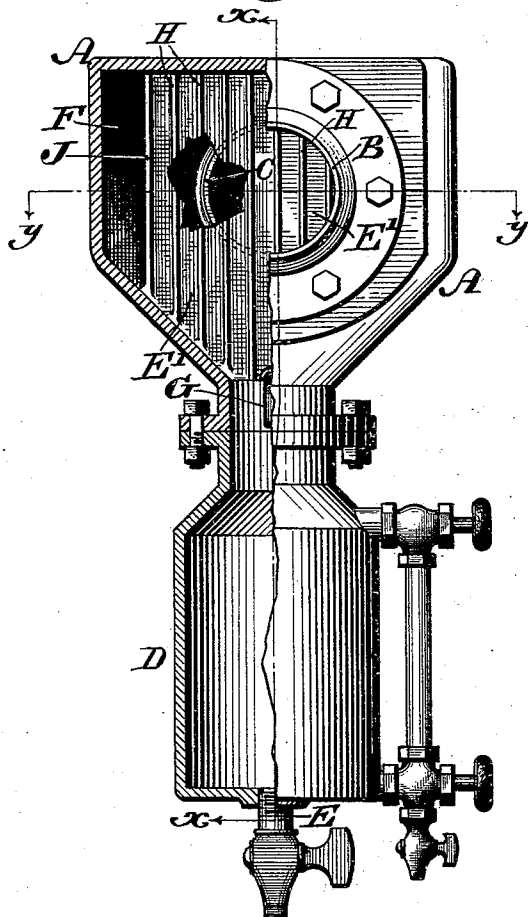


Fig. 2.

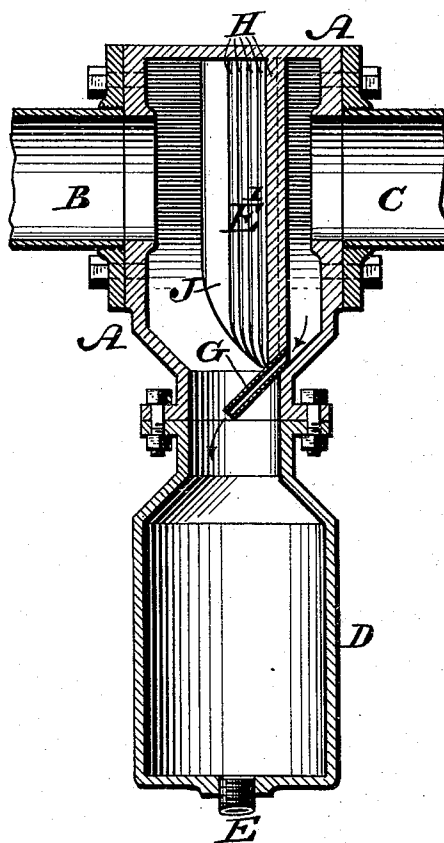
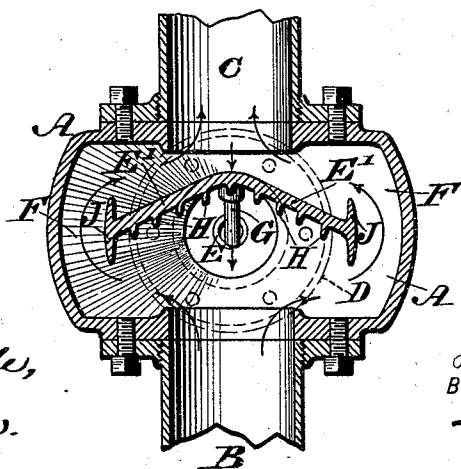


Fig. 3.



WITNESSES:

L. Dowdell,
P. O. Angle.

INVENTOR

David Cochrane
BY *John A. Federshaun*
ATTORNEY.

UNITED STATES PATENT OFFICE.

DAVID COCHRANE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
HARRISON SAFETY BOILER WORKS, OF SAME PLACE.

SEPARATOR FOR STEAM.

SPECIFICATION forming part of Letters Patent No. 483,992, dated October 11, 1892.

Application filed July 30, 1892. Serial No. 441,670. (No model.)

To all whom it may concern:

Be it known that I, DAVID COCHRANE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Separators for Steam, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of improvements in separators for steam, whereby the same may be purified or the solid matters removed therefrom, the construction of parts being hereinafter fully described, and the novel features pointed out in the claims.

Figure 1 represents a partial side elevation and partial vertical section of a separator embodying my invention. Fig. 2 represents a vertical section on line $x x$, Fig. 1. Fig. 3 represents a horizontal section on line $y y$, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a casing, which is provided with the inlet-pipe B and outlet-pipe C, and having its lower end reduced in diameter, where it has connected with it the communicating well D, which latter is provided with the drip-pipe E, for discharge of the contents of the well.

Within the casing A is secured a baffle-plate E', which extends in vertical direction from the top to the bottom of said casing and is separated from the sides of the same, leaving the passages F between them, forming a chamber the top and bottom of which is closed, all as most plainly shown in Fig. 3. At the base of the baffle-plate is a drain-pipe G, the same forming a communication between the discharge side of the casing A and the well D, as will be seen on reference to Fig. 2. On the inlet side of said baffle-plate are ribs H, and at the ends of the same on the discharge side are ribs J.

In order to increase the surface of the baffle-plate, the same is deflected from a right line in curved or angular direction toward the discharge side of the casing, (see Fig. 3.)

thus also exposing the entire surface to the well on the inlet side.

The operation is as follows: Steam, with its impurities, is admitted into the casing, wherein it strikes against the baffle-plate, and the steam is deflected by the same to the passages F and into the aforesaid chamber, from whence it reaches the discharge-pipe C. The non-elastic impurities—such as water, oil, &c.—by their impact upon the baffle-plate, lose their momentum and are prevented from following the course of the steam, owing to the ribs H, and so they are directed by the latter into the well, from which they may be drained or conveyed elsewhere. The water of condensation in the outlet side of the casing descends to the bottom of the same to the pipe G and so reaches the well.

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

1. A separator consisting of a casing with inlet and outlet pipes, a communicating well below the same, and a baffle-plate, which latter extends vertically in said casing and forms a chamber which is closed at top and bottom and has passages at its sides, substantially as described.

2. A separator having in the casing thereof a vertically-extending baffle-plate forming a chamber which is closed at top and bottom and has passages at its sides and deflected toward the outlet side, substantially as described.

3. A separator having a baffle-plate in the casing thereof which forms a chamber, the same being closed at top and bottom and has passages at its sides, a communicating well below said casing, and a drain-pipe at the base of the baffle-plate, leading from the discharge side of the casing to said well, said parts being combined substantially as described.

DAVID COCHRANE.

Witnesses:

JOHN A. WIEDERSHEIM,
L. JENNINGS.