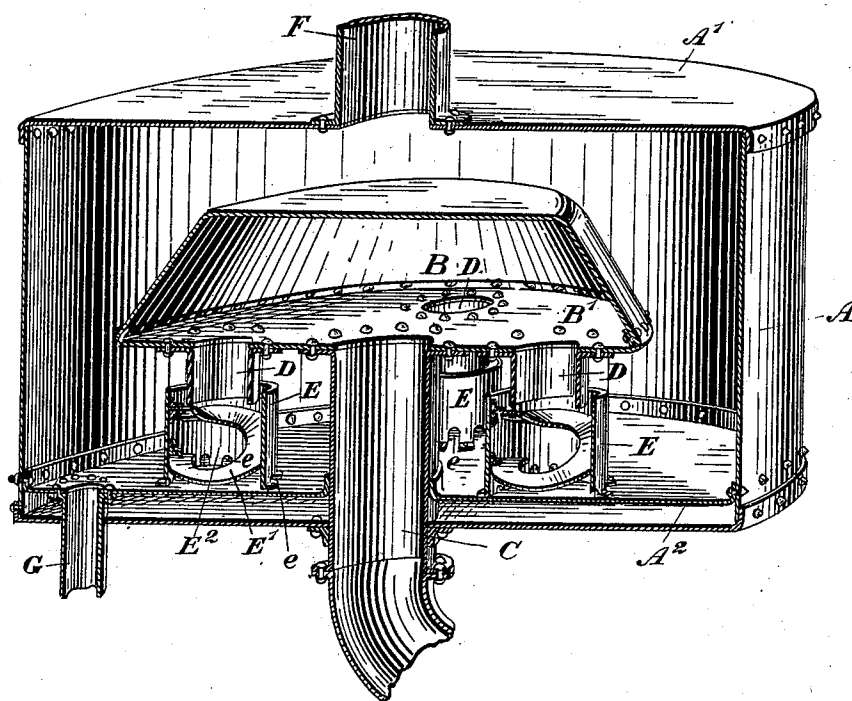


(No Model.)

H. E. MOFFAT.
OIL EXTRACTOR FOR EXHAUST STEAM.

No. 539,073.

Patented May 14, 1895.



Witnesses.

H. T. Young
E. R. Case

Inventor:

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UNITED STATES PATENT OFFICE.

HENRY ESSON MOFFAT, OF GALT, CANADA.

OIL-EXTRACTOR FOR EXHAUST-STEAM.

SPECIFICATION forming part of Letters Patent No. 539,073, dated May 14, 1895.

Application filed September 25, 1894. Serial No. 524,044. (No model.)

To all whom it may concern:

Be it known that I, HENRY ESSON MOFFAT, manufacturer, of the town of Galt, in the county of Waterloo, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Oil-Extractors for Exhaust-Steam, of which the following is a specification.

My invention relates to improvements in oil extractors for exhaust steam and the object of the invention is to provide an extractor, which will thoroughly remove the oil from the exhaust steam which is afterward condensed and utilized over again in the boiler and it consists essentially preferably of a cylinder casing having situated within it an inclosed hood with depending spouts leading into cylinder cups having perforated lower edges and single threaded inwardly extending screw flanges extending from top to bottom of the cups, the cups being secured at the bottom of the casing and the exhaust steam being introduced through a pipe extending through the bottom of the casing into the hood, a corresponding escape pipe being provided at the top of the upper head of the cylinder to convey away the steam when the oil is extracted and a drip pipe being provided to carry away the oil extracted, the parts being arranged and constructed in detail as hereinafter more particularly explained.

The drawing represents a perspective sectional view of my oil-extractor.

A, is the cylinder, which is provided with the upper and lower heads, A', and, A².

B, is an inclosed hood or chamber, which is supported within the cylinder, A, on the upper end of the exhaust pipe, C.

D, shows a series of depending spouts secured to the bottom plate, B', of the chamber, B.

E, shows cylinder cups corresponding in number to the spouts, D, and situated directly beneath them. The cups, E, are of larger diameter than the spouts, D, and are provided with an internal screw conveyor, E', extending from near the top to the bottom of the cup. A circular space, E², is left beneath the spout, B, and is preferably of the same internal diameter.

e, shows a series of holes made in the bottom edge of the cylinder portion of the cup, E.

F, is an escape pipe, which is secured in the

center of the top of the head, A', and leads to the outer air.

G, is the drip pipe, which is secured in the bottom head, A².

Having now described the principal parts involved in my invention I shall briefly describe its operation.

The exhaust steam containing the oil enters through the pipe, C, and is deflected by the inclosed hood or chamber, B down through the spouts, D, into the cup, E, where the oil is precipitated upon the screw conveyers, E', mostly on the bottom side thereof and drips down into the bottom of the cup where it passes through the holes, e, out upon the head, A², where it is carried off by the drip pipe, G. The steam, however, rises from the cups, E, and passes around the hood and out by the escape pipe, F, back to the boiler.

I find that the cups, E, with the internal conveyers E', arranged as described completely remove all oil from the steam. The chamber or hood, B, is preferably arranged centrally within the cylinder hood, so as to permit of the free passage of the steam around the hood or chamber.

What I claim as my invention is—

1. An oil extractor composed of the cylinder chamber having exhaust and return pipes, an inclosed hood connected to and supported upon the exhaust pipe and having depending spouts and cylinder cups situated beneath the spouts and provided with openings at the bottom of the cylinder portion and a drip pipe extending through the bottom cylinder head as and for the purpose specified.

2. An oil extractor composed of the cylinder chamber, A, having exhaust and escape pipes, C and, F, respectively, an inclosed hood, B, connected to and supported upon the exhaust pipe and having depending spouts and cylinder cups E, situated beneath the spouts and provided with openings at the bottom of the cylinder portion, the screw conveyor flanges extending from top to bottom of the cups and the drip pipe extending through the bottom cylinder head as and for the purpose specified.

HENRY ESSON MOFFAT.

Witnesses:

B. BOYD,

H. T. S. YOUNG.