

M. EVANS.
Lubricators.

No. 158,264.

Patented Dec. 29, 1874.

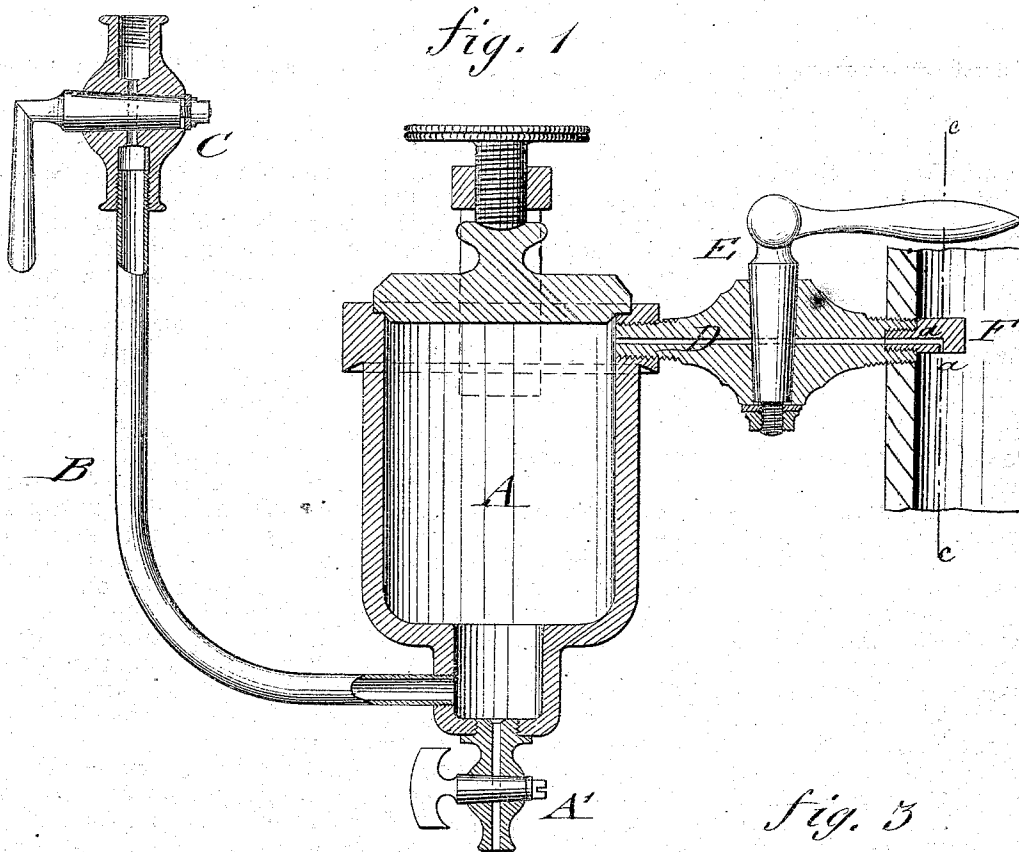


fig. 2

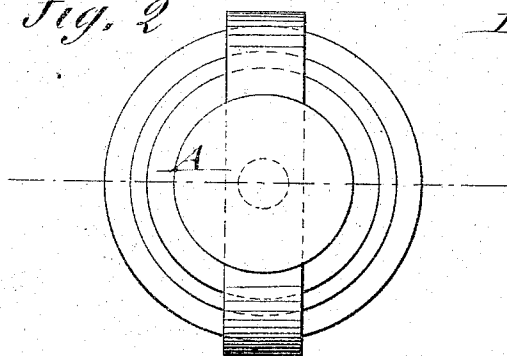
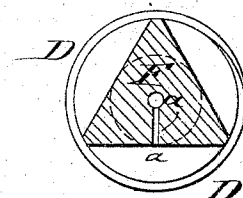


fig. 3



WITNESSES:

C. Newell
A. F. Terry

INVENTOR,

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UNITED STATES PATENT OFFICE.

MORRIS EVANS, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **158,264**, dated December 29, 1874; application filed August 29, 1874.

To all whom it may concern:

Be it known that I, MORRIS EVANS, of the city and county of Erie and State of Pennsylvania, have invented a new and Improved Lubricator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 represents a sectional side elevation, Fig. 2 a top view, and Fig. 3 a detail vertical transverse section, of the jet attachment.

The invention will first be fully described, and then pointed out in the claims.

A represents the lubricator, connected, by a separate pipe, B, having cock C, with the steam-space of boiler, or with a pipe leading therefrom. The pipe B enters the lubricating-reservoir A near the lower part and above a waste-water cock, A'. A pipe, D, with cock E, connects the upper part of the reservoir A with the pipe F, that enters the pipe leading into the steam-chest. The attachment F is made in triangular shape, perforated to connect with pipe D, and the perforation extended, so that the lubricant issues through a minute orifice, *a*, in a downward direction, to the space of less pressure. The melted tallow or other lubricant is thereby thrown in a continuous stream, jet, or spray into the steam-chest and cylinder, and the quantity of the stream easily controlled by the regulating steam-cock.

My method of lubrication uses live steam direct from the boiler solely as the active power by which the lubricant is carried to and deposited upon the surfaces to be lubricated, while no water is used, except in the form of steam, and no condenser with my lubricator, as water would do more harm than good.

The discharge-nozzle is peculiar, and secures an uninterrupted flow at all times, independent of the effect of the governor, while there is never any water in the reservoir of my lubricator. The lubricant being placed in the reservoir, when the reservoir is closed and the steam turned on, the latter, passing through the lubricant, and becoming laden therewith in its most dispersed and comminuted shape,

performs its function promptly, gradually, and effectually.

To the penetrative and disintegrating effect of steam at high temperature and under high pressure is added the assistance of motion produced by the steam passing through the lubricating material, and fitting it for the work it is intended to perform in the best manner possible. In these respects my invention differs from all others.

By my invention I am able to convey animal fat in its first or primitive condition to the surfaces to be lubricated before the processes of rendering and subsequent granulation have destroyed thirty per cent. of the lubricating effect.

Machinists have known for some time that animal fat, if applied before it is passed through the process of granulation, possessed a far greater lubricating power than if heated a second time, but suet has heretofore been introduced with difficulty from the want of proper appliances.

My invention furnishes the conditions in perfection; for, by it, the native suet, taken direct from the animal, is put into the reservoir and rendered by the live steam under pressure, (the best of conditions,) and is applied to the surfaces to be lubricated without cooling and at just the time when the lubricating principle is best developed in the substance used. With such surplus of energy is this accomplished that the cellular tissue, gelatine, and even bits of bone, which may find their way with the suet into the reservoir, are digested and carried over with the steam, either chemically dissolved or mechanically suspended in it.

Having thus described my invention, what I claim as new is—

1. The combination, with a discharge device, D E F, of lubricant-reservoir A and steam-pipe B C, arranged as shown and described.

2. The triangular jet attachment F, having orifice *a*, combined with pipe D, as and for the purpose specified.

Witnesses: MORRIS EVANS.

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G. W. F. SHERWIN.