

(No Model.)

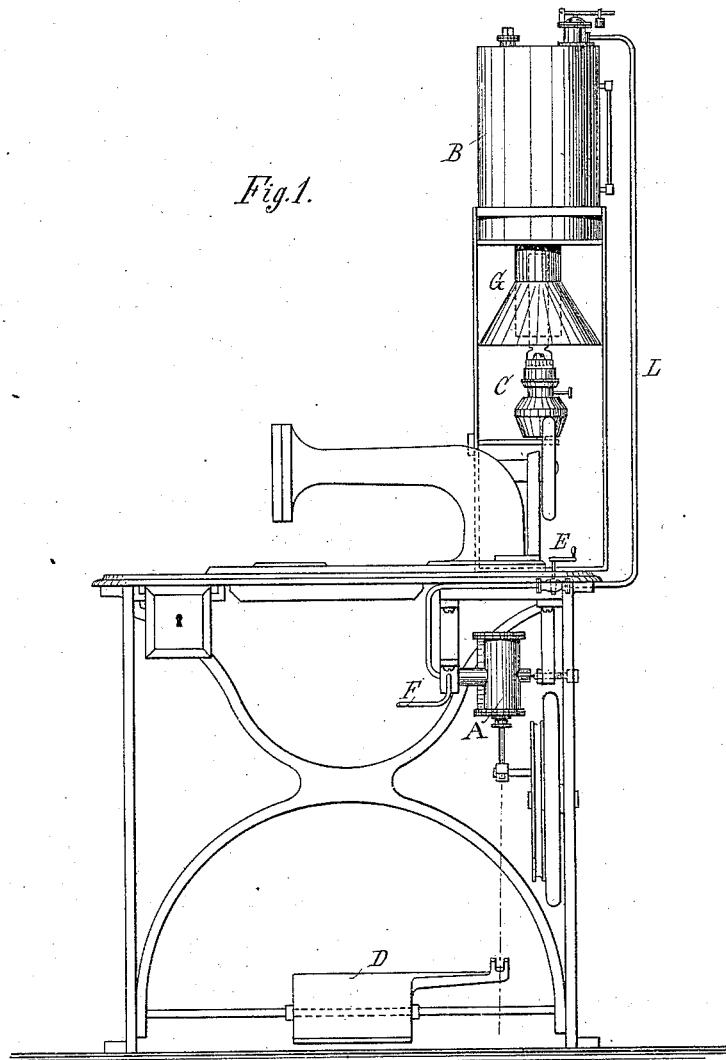
2 Sheets—Sheet 1.

L. HEINRICI.

STEAM GENERATOR FOR SEWING MACHINE MOTORS, &c.

No. 305,307.

Patented Sept. 16, 1884.



Witnesses
William Miller
Otto Hufeland

Inventor
Louis Heinrici
by *Vandervoort Hauff*
his att'ys

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Fig. 2.

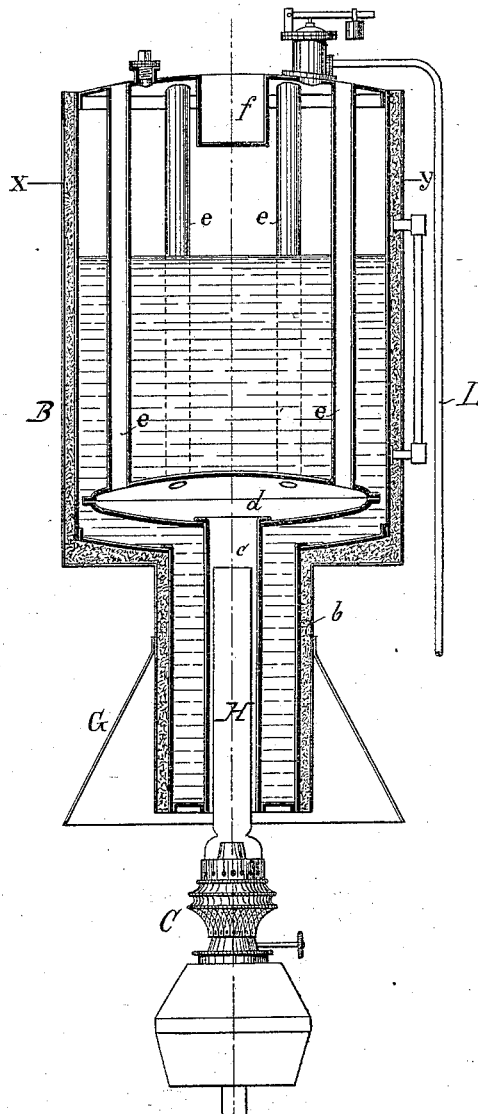
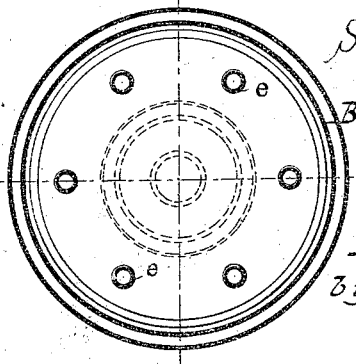


Fig. 3.

Section xy.



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UNITED STATES PATENT OFFICE.

LOUIS HEINRICI, OF ZWICKAU, SAXONY, GERMANY.

STEAM-GENERATOR FOR SEWING-MACHINE MOTORS, &c.

SPECIFICATION forming part of Letters Patent No. 305,307, dated September 16, 1884.

Application filed November 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, LOUIS HEINRICI, a subject of the King of Saxony, and a resident of Zwickau, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Steam-Generators for Motors for Sewing-Machines and other Operators for House Industries, of which the following is a specification.

10 This invention relates to a steam-generator for motors adapted for the operation of various machines; and said motor consists in the construction and combination of devices hereinafter described and claimed, reference being had to the accompanying drawings, in which—

15 Figure 1 shows a front view of the motor in connection with a machine, the example taken being a sewing-machine. Fig. 2 shows a vertical central section of the boiler on a larger scale than that of Fig. 1. Fig. 3 shows a section in the plane X Y, Fig. 2.

Similar letters indicate corresponding parts.

25 In the drawings, A represents a cylinder, the example taken being an oscillating cylinder, and B represents a boiler.

C represents a lamp, which serves to heat the boiler and to give light. This lamp may be a petroleum-lamp, gas-lamp, or any other suitable device.

30 The cylinder A in the example shown is arranged under the table of a sewing-machine, and the piston-rod connects directly with the crank-pin of the driving-wheel or fly-wheel, which wheel thus serves as a common fly-wheel for the machine and the motor.

35 The steam-conduit L is provided with a stop-cock or closing device, E, which may be arranged on the table within easy reach of the operator, so that by closing said stop-cock the motor and the machine may at any moment be brought to a standstill.

40 The steam-boiler B is shown as arranged above the table on a stand, so that the lamp C, used for heating the boiler, will at the same time illuminate the object which is being operated on.

45 Figs. 2 and 3 show in detail the construction of the boiler B. The boiler B is provided with a recess, c, which is formed in the shape of a tube located centrally in a pendent extension of the boiler, which extension constitutes

a water-leg, b. Into this recess c the chimney H of the lamp C may be made to pass. This arrangement insures a thorough utilization of heat, as the chimney H delivers its heat along its entire length to the water-leg of the boiler. 55 The hot products of combustion pass out at the upper end of the recess c into the chamber d, and from thence through a series of tubes or channels, e, leading from said chamber d to the upper part or roof of the boiler, and into the open air.

A depression, f, in the roof of the boiler may serve for heating any desired object placed therein. To prevent radiation of heat 65 the boiler is surrounded with a non-conductor of heat—as, for example, felt. A reflector, G, may be slid onto the lower part of the boiler B, and said reflector may be placed higher or lower, as desired, so as to illuminate the work which is being done. The arrangement and form of the channels e may be such as desired—as, for example, straight, spiral, or worm tubed. 70

The steam from the escape F may be led 75 into a condenser or disposed of in any desired manner.

This motor offers several advantages, in that it enables the work operated on to be illuminated, and heats the room in which the work 80 is being done. The motor can be easily adjusted on any machine—for example, a sewing-machine—where it is not obstructive, and allows the machine to be worked by the treadle D, if desired. The motor is also safe and 85 economical, and does not require a separate attendant in addition to the one looking after the machine to which the motor is applied.

I am aware of patent to N. M. Simmons, May 18, 1877, No. 190,631, for liquid heater; 90 also the patent to J. Bowlein, December 17, 1882, No. 133,918, for coffee-pot. My invention differs therefrom in the construction and combination specified in the following claims, by means whereof steam is not only generated, 95 but provision is made for conducting it to a cylinder for use as a motive power, whereby the device is adapted to a use different from what the patented devices are susceptible of.

What I claim as new, and desire to secure by 100 Letters Patent, is—

1. A steam-generator consisting of a boiler,

B, the bottom wall of which is constructed with a recess, *c*, in the form of a tube, extending into the water-space of the boiler, and open at its lower end to receive a lamp-chimney, a
5 chamber, *d*, in the water-space of the boiler, into which the recess opens, tubes *e*, connected with said chamber, and open at their upper ends to the external atmosphere through the upper portion of the boiler, and a steam-con-
10 duit for connecting the steam-space of the boiler with a cylinder, and having a device, *E*, for closing the supply of steam, substantially as described.

2. A steam-generator consisting of a boiler,
15 B, the bottom wall of which is constructed with a pendent water-leg, *b*, a recess, *c*, in the

form of a tube, extended through the water-leg for receiving the lamp-chimney *H*, a chamber, *d*, in the water-space of the boiler, connected with the upper end of the recess, tubes 20
e, extending from said chamber and communicating with the external atmosphere through the top of the boiler, and a steam-conduit, *L*, for connecting with a steam-cylinder.

In testimony whereof I have signed my name 25
to this specification in the presence of two subscribing witnesses.

LOUIS HEINRICI.

Witnesses:

F. WILKIE,
H. FRANKE.