

No. 658,793.

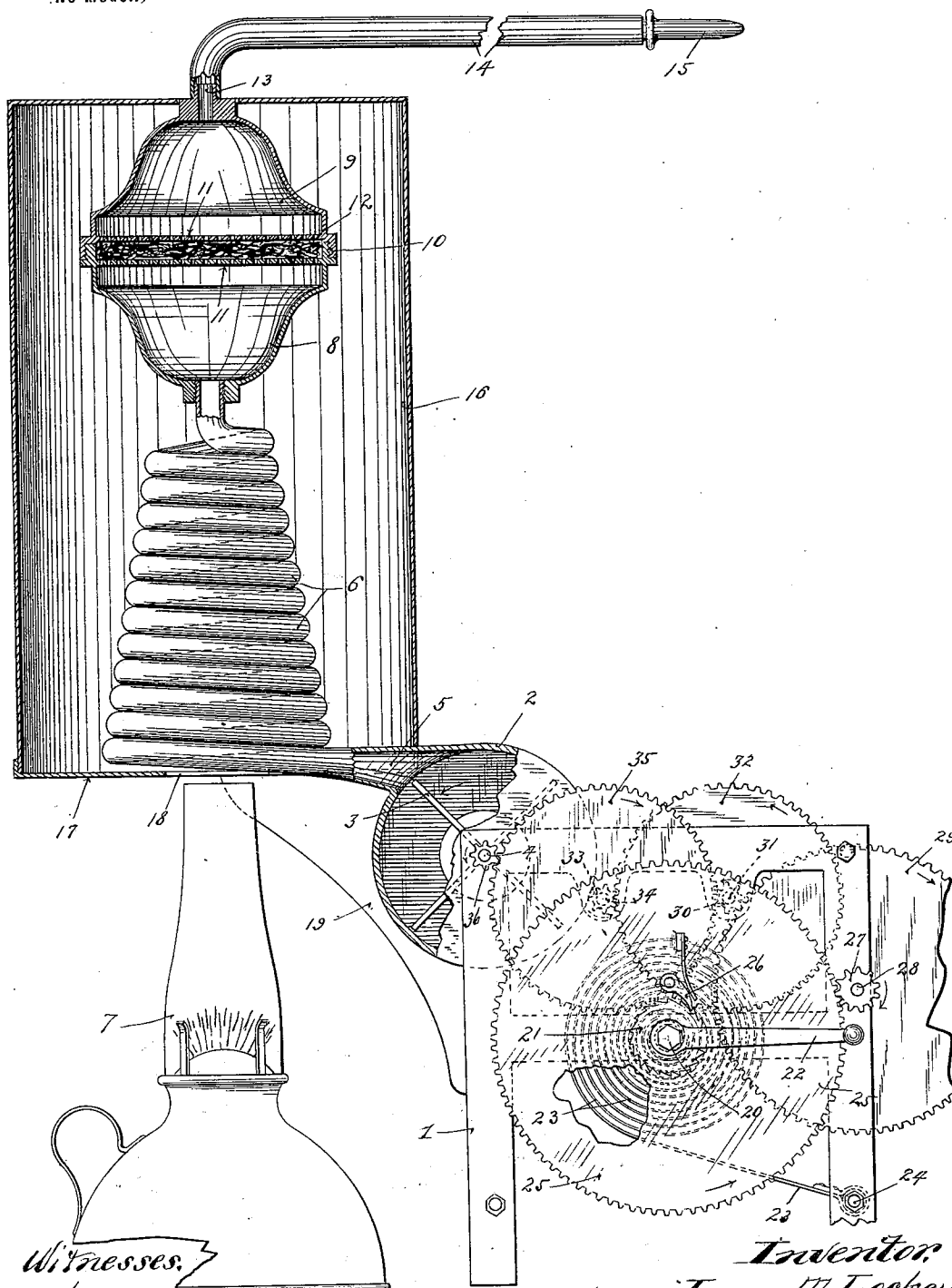
Patented Oct. 2, 1900.

J. M. LOCKEY.

VAPORIZER.

(Application filed Aug. 21, 1899.)

(No Model.)



Witnesses,

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UNITED STATES PATENT OFFICE.

JAMES M. LOCKEY, OF FAULKTON, SOUTH DAKOTA.

VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 658,793, dated October 2, 1900.

Application filed August 21, 1899. Serial No. 727,961. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. LOCKEY, a citizen of the United States, residing at Faulkton, in the county of Faulk and State of South Dakota, have invented certain new and useful Improvements in Vaporizers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to vaporizers, and has for its object to improve the same in the several particulars hereinafter noted; and to such ends it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

The invention is illustrated in the accompanying drawing.

The single view of the drawing shows the vaporizer or apparatus partly in side elevation and partly in vertical section, some parts being broken away.

In accordance with the scheme of my invention I employ, in connection with a vaporizing device, a fan with connections for delivering a blast of air to said vaporizing device. The fan is driven by a suitable spring-motor, and preferably provision is made for heating the blast of air before it reaches the vaporizing device. In the illustration given in the drawing the numeral 1 indicates a skeleton framework upon which the movable parts of the spring-motor are suitably mounted. This frame 1 also supports a fan-case 2, in which a rotary fan 3, having a shaft 4, is mounted to run. The fan-case 3 is provided with a discharge spout or section 5, which runs into a vertically-disposed and preferably tapered heating-coil 6. The coil 6 is projected from the fan-case 2 and stands in such position that a lamp 7 may be placed directly thereunder.

The vaporizing-chamber is constructed in two parts 8 and 9, which are connected by screw-threaded engagement, as indicated at 10. The lower section 8 is directly secured to and forms an expanded extension of the upper end of the coil 6. In the illustration given each section 8 and 9 is provided with a perforated partition 11, which partitions are spaced apart to form a transversely-extended chamber, into which cotton or other absorbent

material 12 may be placed. This absorbent material 12 is to be saturated with the liquid prescription which is to be vaporized. At its top the upper section 9 of the atomizer vessel is shown as provided with a discharge-nipple 13, onto which one end of a flexible tube 14 is secured, said tube being provided at its other end with a discharge-nozzle 15. A cylindrical case 16 incloses the atomizing vessel 8 9 and the coil 6, the same, as shown, being supported on a flanged bottom plate 17, which has a central perforation 18 at the center of the coil 6 and is itself supported by a bracket 19 of the frame 1.

The spring-motor for propelling the fan 3 comprises (in the construction shown) as follows: A shaft 20, loosely mounted in the frame 1 and provided with a ratchet-wheel 21 and a winding-crank 22, is secured to one end of a coiled spring 23, which spring is secured at its other end to the frame 1, as shown at 24. 25 indicates a large gear-wheel, which is loosely mounted on the shaft 20 and is provided with a spring-pressed pawl 26, which coöperates with the ratchet-wheel 21 on the shaft 20. This gear-wheel 25 meshes with a pinion 27, carried by a shaft 28, which is loosely mounted in the frame 1 and is provided with a gear-wheel 29. The gear-wheel 29 meshes with a pinion 30, carried by a shaft 31, which is loosely mounted in the frame 1 and is provided with a large gear-wheel 32. Again, the gear-wheel 32 meshes with the pinion 33, carried by a shaft 34, that is loosely mounted on the frame 1, and is provided with a large gear-wheel 35, which in turn meshes with a pinion 36 on the fan-shaft 4.

When the vaporizer is to be used, the medicine to be evaporated or atomized is placed upon the cotton or absorbent material 12, which is held by the perforated partitions 11 of the evaporating vessel 8 9. The spring 23 is wound up by means of the crank 22, and the lamp 7 is preferably lighted. The spring-motor being thus wound up and released will propel the fan 3 at a high velocity, thereby forcing air through the coil 6, through the medicated absorbent material within the evaporating-chamber, and finally through the tube 14 and nipple 15. When the lamp is lighted, it will act directly upon the heating-coil 6, so that the blast of air will be

heated to a considerable extent or to any extent desired, according to the intensity of the flame, before it reaches the medicated absorbent material. In this hot or heated condition the air more readily absorbs or takes up the medicine or material to be atomized.

With this form of vaporizer many medicines, even in the solid form, may be vaporized when placed within the evaporizing-chamber in place of or intermixed with the absorbent material 12.

It will of course be understood that the invention above described is capable of considerable modification within the scope of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

A vaporizer comprising in combination a

heating-coil, a fan delivering to said heating-coil, a spring-motor for propelling said fan, a vaporizing-chamber receiving from said coil, a tube delivering from said vaporizing-chamber, said vaporizing-chamber comprising the bulged sections 8, 9, united by screw-threads 10, and provided each with an interior perforate partition, between which partitions a medicated, absorbent material is adapted to be contained, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES M. LOCKEY.

Witnesses:

A. A. COLGROVE,
W. B. VINTON.