

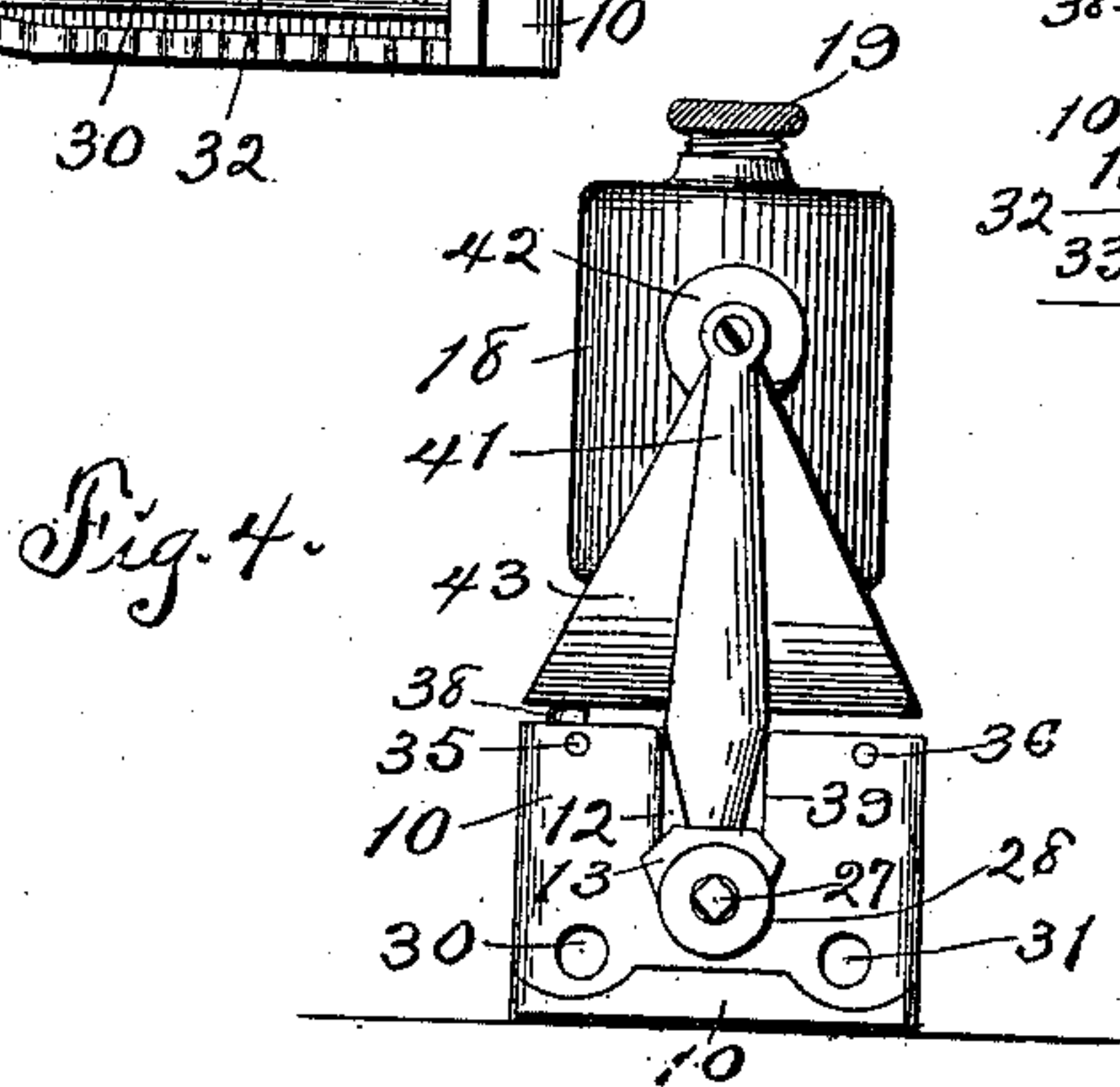
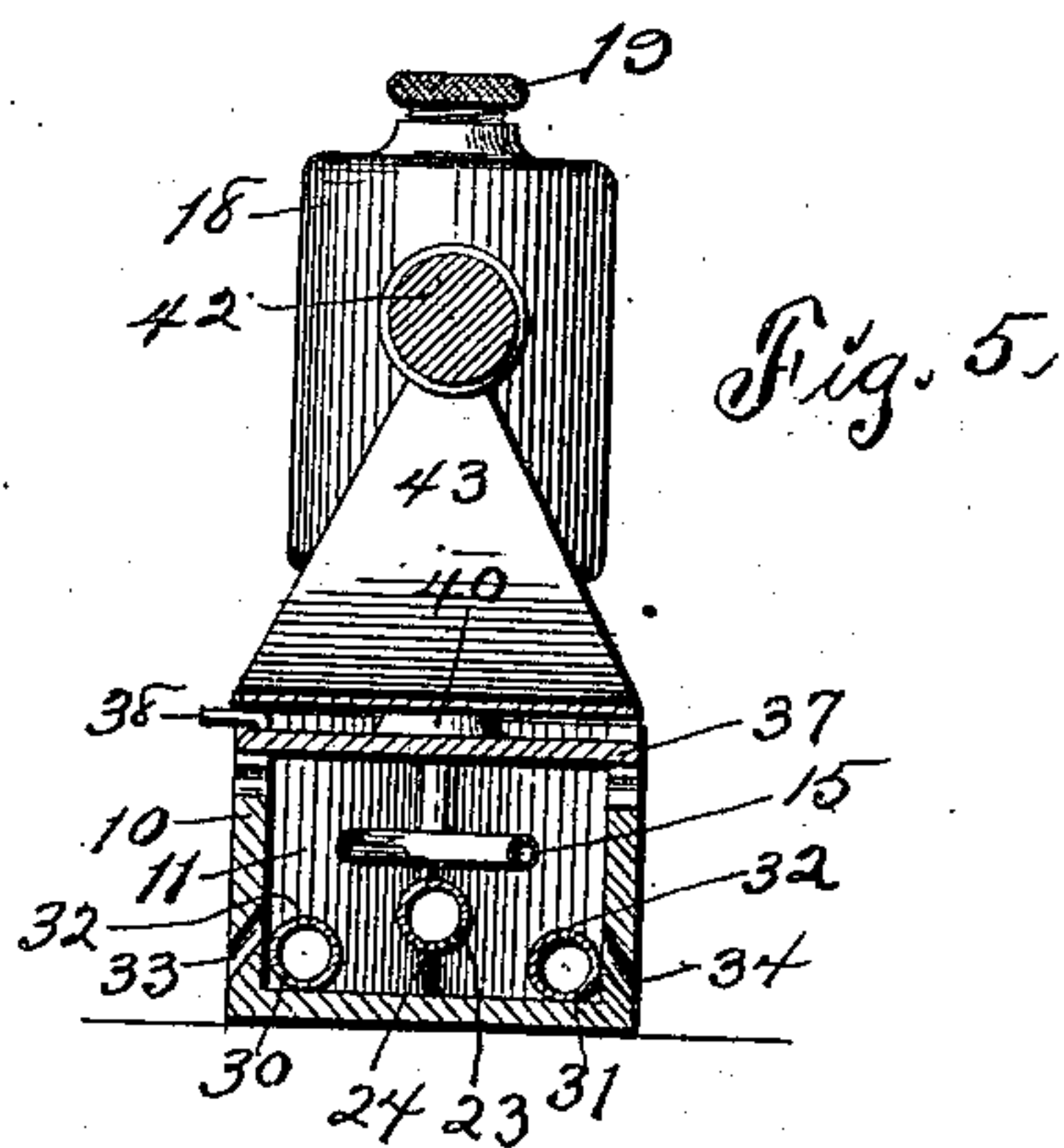
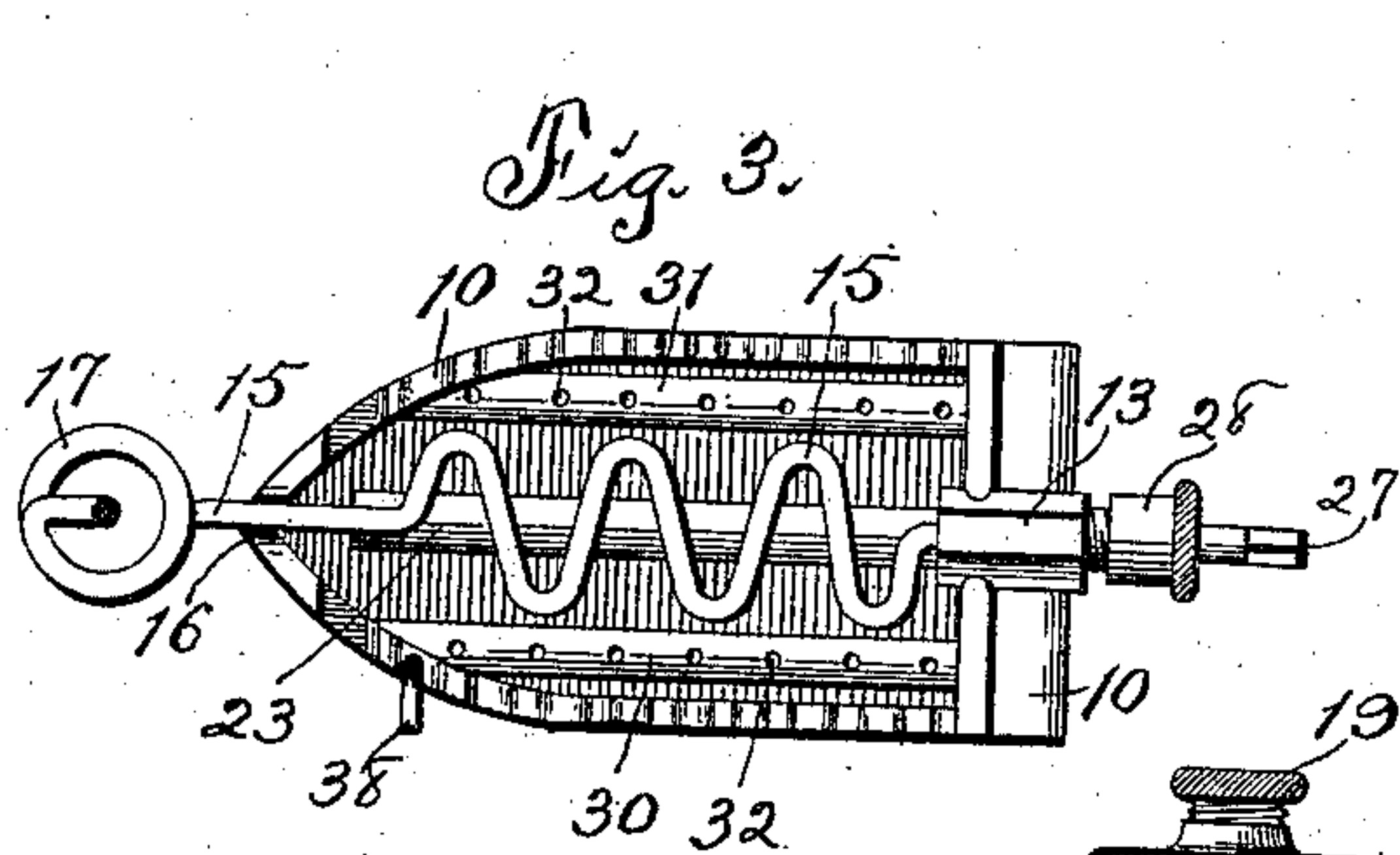
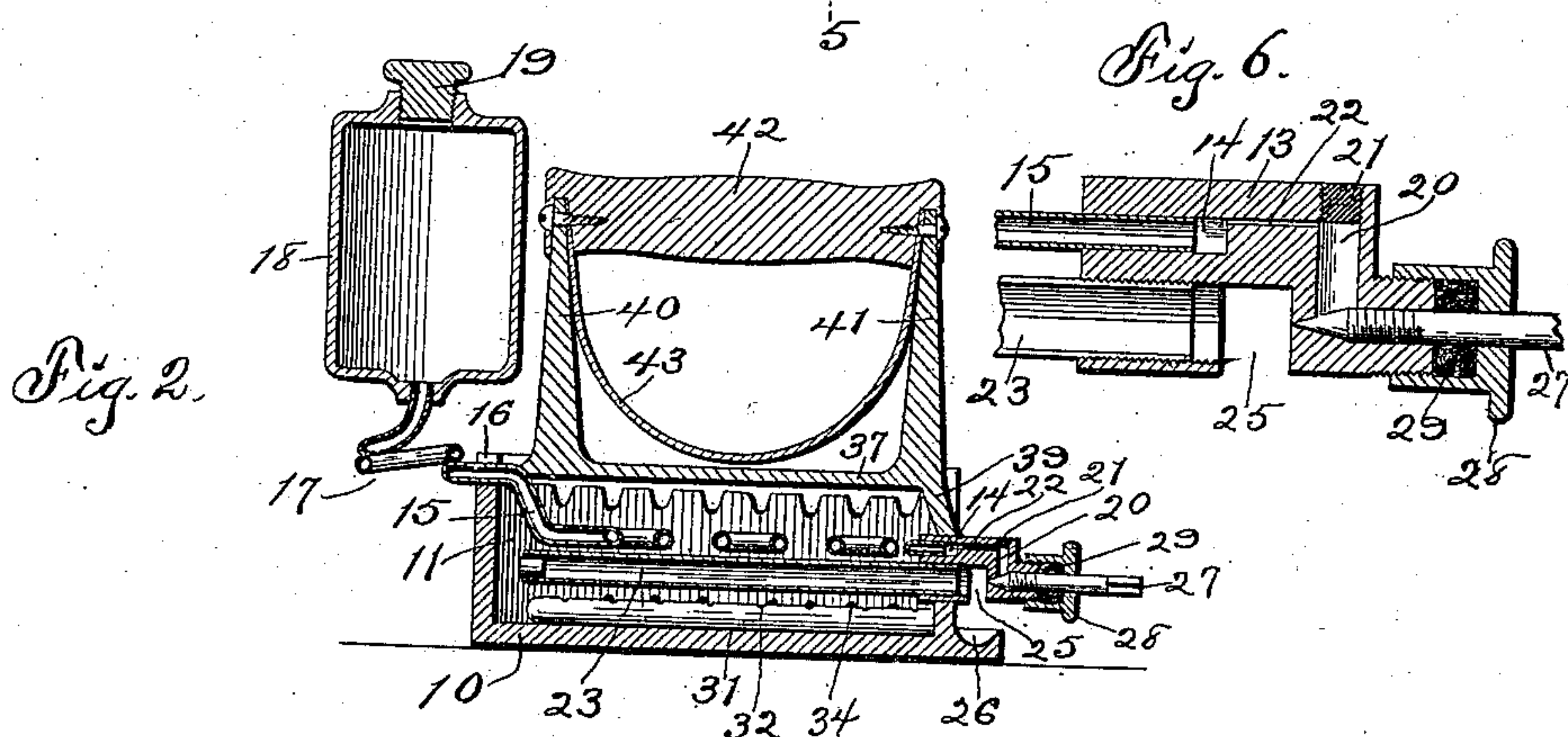
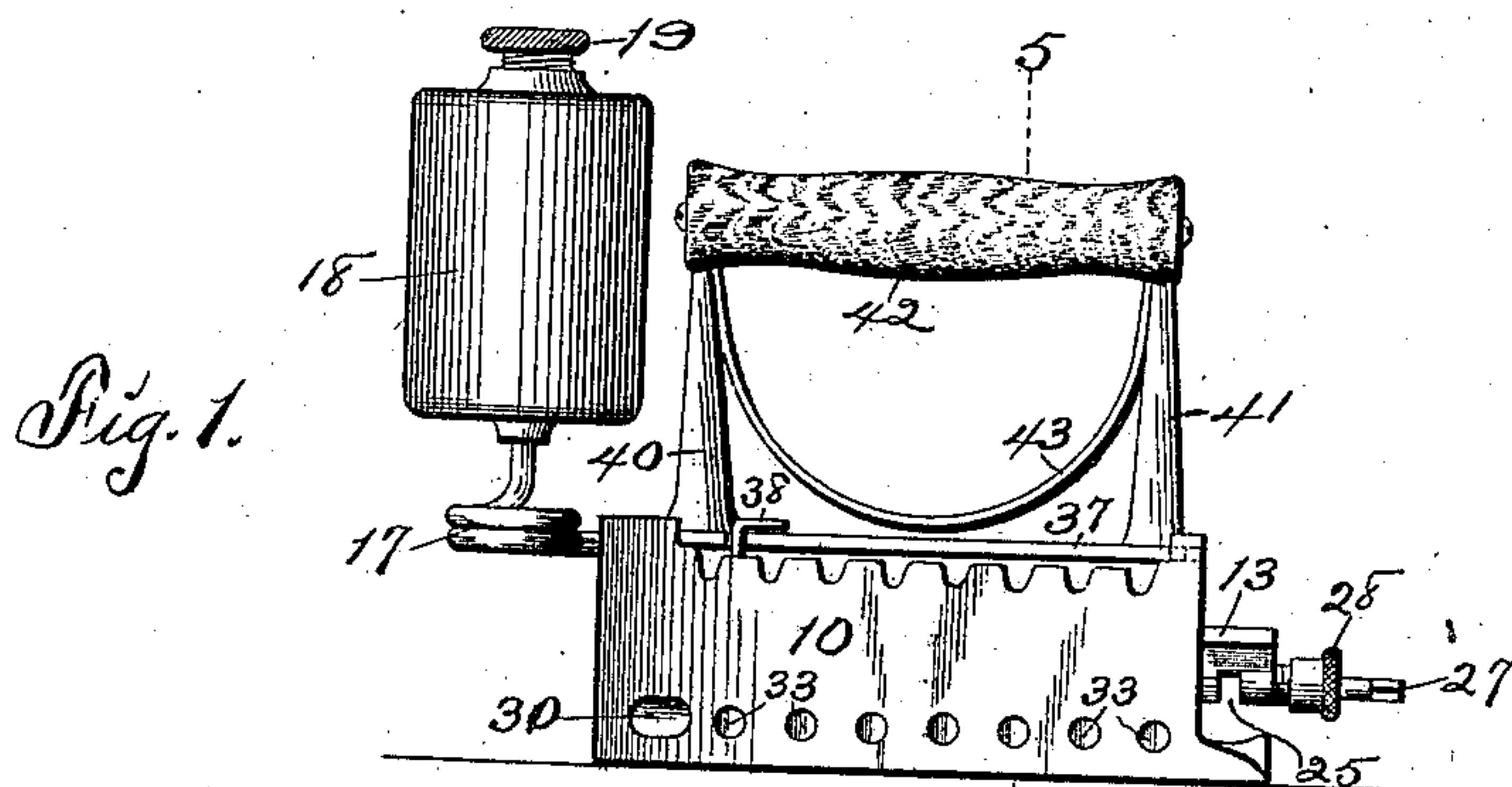
No. 685,423.

W. W. LAMB.
SAD IRON.

Patented Oct. 29, 1901.

(Application filed June 24, 1899.)

(No Model.)



Attest:
J. F. Groat,
W. Ellis.

Inventor:
W. W. Lamb
By J. H. Sweet
Att'y

UNITED STATES PATENT OFFICE.

WILBERT W. LAMB, OF SIOUX CITY, IOWA.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 685,423, dated October 29, 1901.

Application filed June 24, 1899. Serial No. 721,736. (No model.)

To all whom it may concern:

Be it known that I, WILBERT W. LAMB, a citizen of the United States of America, and a resident of Sioux City, Woodbury county, Iowa, have invented certain new and useful Improvements in Sad-Irons, of which the following is a specification.

The object of this invention is to provide improved means for heating a sad-iron and maintaining the same at a heated temperature.

A further object of my invention is to provide a sufficient supply of air to the flame-chamber of a sad-iron to insure perfect combustion therein of the heat-supplying medium.

A further object of my invention is to provide means to insure the perfect vaporization of the fluid employed as the heating medium in advance of the burning thereof in the flame-chamber of the sad-iron.

A further object of my invention is to provide improved means for attaching a cover and handle to a sad-iron in such a manner as that said cover and handle may be removed and replaced readily and conveniently.

My invention consists in the construction, arrangement, and combination of the elements hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of the complete device. Fig. 2 is a vertical section of the device longitudinally of Fig. 1. Fig. 3 is a plan of the device, the cover and liquid-tank being removed. Fig. 4 is a rear end elevation of the device. Fig. 5 is a cross-section of the device on the indicated line 5 5 of Fig. 1. Fig. 6 is an enlarged detail section of the generator.

In the construction of the device as shown the numeral 10 designates the base, formed with an interior flame-chamber 11, the side and end walls of the base rising from and at right angles to the bottom, thus providing a flame-chamber of great capacity relative to the exterior dimensions of the base. The rear end wall of the base 10 is formed with a notch 12 in the center thereof and opening to its top. A generator 13 is provided and formed with notches in vertical planes on op-

posite sides, which generator is seated in the notch 12 of the rear end wall of the base 10, and the notches thereof engage and receive the edges of said end wall. The generator 13 is formed with a horizontally-disposed trap-chamber 14 in its forward end portion, and a supply-pipe 15 is screwed into said trap-chamber. The supply-pipe is bent laterally within and extends longitudinally of the upper portion of the flame-chamber 11 of the base 10, forming a sinuous passage for the fluid in the flame-chamber. The supply-pipe 15 extends outward from the flame-chamber through a notch 16, formed at the point of convergence of the forward ends of the side walls of the base 10, and a horizontal coil 17 is formed in said pipe in front of the base. The supply-pipe 15 rises from the horizontal coil 17 and is screwed at its upper end into the lower end of a supply-tank 18, arranged and so shaped as to be supplied with gasolene or similar liquid and furnish said liquid to the pipe. The supply-tank 18 is provided with an opening or mouth to receive the plug 19, which seals the liquid against escape from the tank by evaporation. The generator 13 is formed with a vertically-disposed well 20 in its rear portion, which well is drilled in the generator from the top and normally closed by a screw-plug 21, seated in the upper end thereof. The generator 13 also is formed with a horizontally-disposed communicating passage 22, of minute diameter, leading from the upper end of the trap-chamber 14 to the upper portion of the well 20. The lower portion of the generator extends rearwardly from the vertical plane of the well 20 and is horizontally bored, the forward end portion of the bore being tapered or reduced to a minute port, the said bore communicating with the lower end of the well. A burner 23 is mounted horizontally in the forward portion of the generator 13, below the supply-pipe 15, and extends longitudinally of the lower portion of the flame-chamber 11 in the base 10, and the forward end of the burner is closed. The burner 23 is mounted in alinement with the bore of the lower rear portion of the generator 13 and receives vapor therefrom, and said burner is formed with three rows of perforations 24 throughout its length and in the lower por-

tion thereof. One row of the perforations 24 opens downwardly from the burner 23, and the other rows of perforations are located on either side of the said row and open toward the bottom of the flame-chamber and at oblique angles to the first. A notch 25 is formed in the lower portion of the generator 13, between the forward end of the lower bore and the rear end of the burner 23, and a drip-cup 26 is formed in a rearwardly-projecting portion of the base 10, immediately below said notch. A needle-valve 27 is screwed in the bore at and transversely of the lower end of the well 20, and the forward end of said needle-valve is cone-shaped and fits in and against the forward portion of said bore and cuts off, when desired, the flow from said bore. A stuffing-box 28 is mounted on the rearwardly-projecting portion of the generator 13, concentric with the needle-valve 27, and a packing 29, of asbestos or similar suitable material, is located in the stuffing-box and surrounds and contacts with the valve. The needle-valve 27 extends rearwardly from the stuffing-box 28 and is made angular for engagement by a wrench or key (not shown) of common form, whereby said valve may be rotated. Ventilating-pipes 30 31 are mounted in and longitudinally of the lower side corners of the flame-chamber 11 and extend through the rear end wall and the forward end portions of the side walls of the base 10. The ventilating-pipes 30 31 are open-ended and rigidly mounted in the base and are formed with upwardly-opening ports 32 in rows throughout their lengths and in the top portions thereof. The upper margins of the intermediate portions of the side walls of the base 10 are cut away and notched below the horizontal plane of the top of the forward ends thereof to provide space for the escape freely of the air from the flame-chamber 11. Ventilating-ports 33 34 are formed in the lower portions of the side walls of the base 10, which ports are inclined, entering the side walls below the tops of the ventilating-pipes 30 31, traversing said walls obliquely upwardly, and entering the flame-chamber 11 in the plane of the tops or above the said pipes, the inner openings of the ports being wholly above the outer openings thereof. By reason of the inclined positioning of the ports 33 34 the atmospheric air must enter the flame-chamber in an upwardly oblique direction and direct the escape of the air from the flame-chamber through the notches and spaces at the tops of the side walls of the base. Holes 35 36 are formed in the upper portions of the rear end wall of the base 10, and a cover 37 is formed with rearwardly-projecting pins on its rear end entering said holes. The cover 37 extends over the flame-chamber 11, and the forward extremity thereof enters the converging space between the converging forward ends of the side walls and is retained by a hook 38, pivotally mounted in a vertical aperture or seat in one of the side walls and adapted to be

turned manually to engage the upper side of the cover. A stud 39 is formed on and extends downwardly from the rear end of the lid 37 and engages the upper face of the generator 13, and thus the generator is held against upward movement from its seat in the base 10. Standards 40 41 are formed on and rise from the ends of the cover 37, and a handle 42 connects the upper ends of said standards. A shield 43 is mounted between the handle 42 and the cover 37, whereby the hand of the operator is protected from the heat of the sad-iron. 70 75 80

I claim as my invention—

1. The combination of the base formed with the flame-chamber and the obliquely-positioned ports in the lower portion thereof, the generator mounted in a notch in the rear end wall of the base and formed with vertical notches engaged by the end wall, the burner on the generator and projecting within the flame-chamber, the supply pipe and tank communicating with the generator, which pipe traverses the upper portion of the flame-chamber longitudinally and is bent or undulated laterally within the flame-chamber, the cover detachably connected with the base, the handle on the cover, a stud on the cover engaging the generator, and ventilating-pipes mounted longitudinally of the flame-chamber and open thereto and also open at both ends outside the flame-chamber. 85 90 95

2. The combination of the base, the flame-chamber therein, the ventilating-pipes mounted longitudinally of the base, which pipes are open at both ends and formed with openings in the flame-chamber, a generator, a supply pipe and tank communicating with the generator, a burner on the generator and extended within the flame-chamber, a cover on the base and a handle on the cover. 100 105

3. A sad-iron comprising the base formed with a flame-chamber and the obliquely-positioned ventilating-ports in the lower portions of the side walls thereof, the ventilating-pipes mounted longitudinally of the base and within the flame-chamber, which ventilating-pipes are open at both ends outside the flame-chamber and are formed with openings in the flame-chamber, a generator, a supply pipe and tank communicating with the generator, a burner on the generator and extended within the flame-chamber between the ventilating-pipes, a cover on the base and a handle on the cover. 110 115 120

4. A sad-iron comprising a base formed with a flame-chamber and the obliquely-positioned ventilating-ports in the side walls thereof, which ports are wholly above the bottom of the base, the ventilating-pipes mounted longitudinally of the base and within the flame-chamber, which ventilating-pipes are open at both ends outside the flame-chamber and are formed with openings in the flame-chamber, and further, are located adjacent the side walls of the base and below the discharge-openings of the obliquely-positioned 125 130

ventilating-ports, a generator on the base, a
supply tank and pipe communicating with
the generator, a burner on the generator
within the flame-chamber, which burner is
5 located midway between the discharge-open-
ings of the ventilating-ports, a cover on the
base and a handle on the cover.

Signed by me at Des Moines, Iowa, this 12th
day of April, 1899.

WILBERT W. LAMB.

Witnesses:

S. C. SWEET,
J. F. GROAT.