

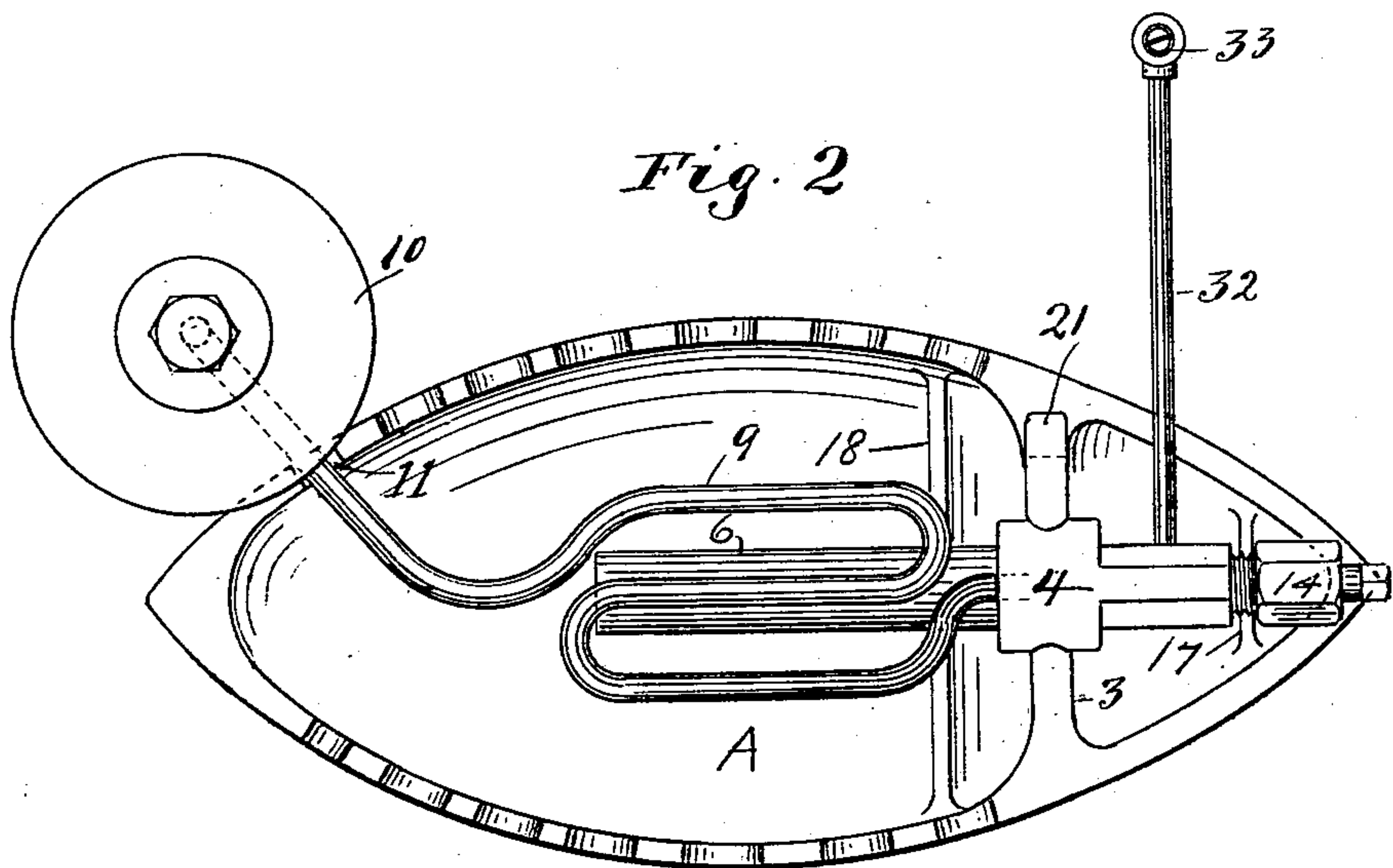
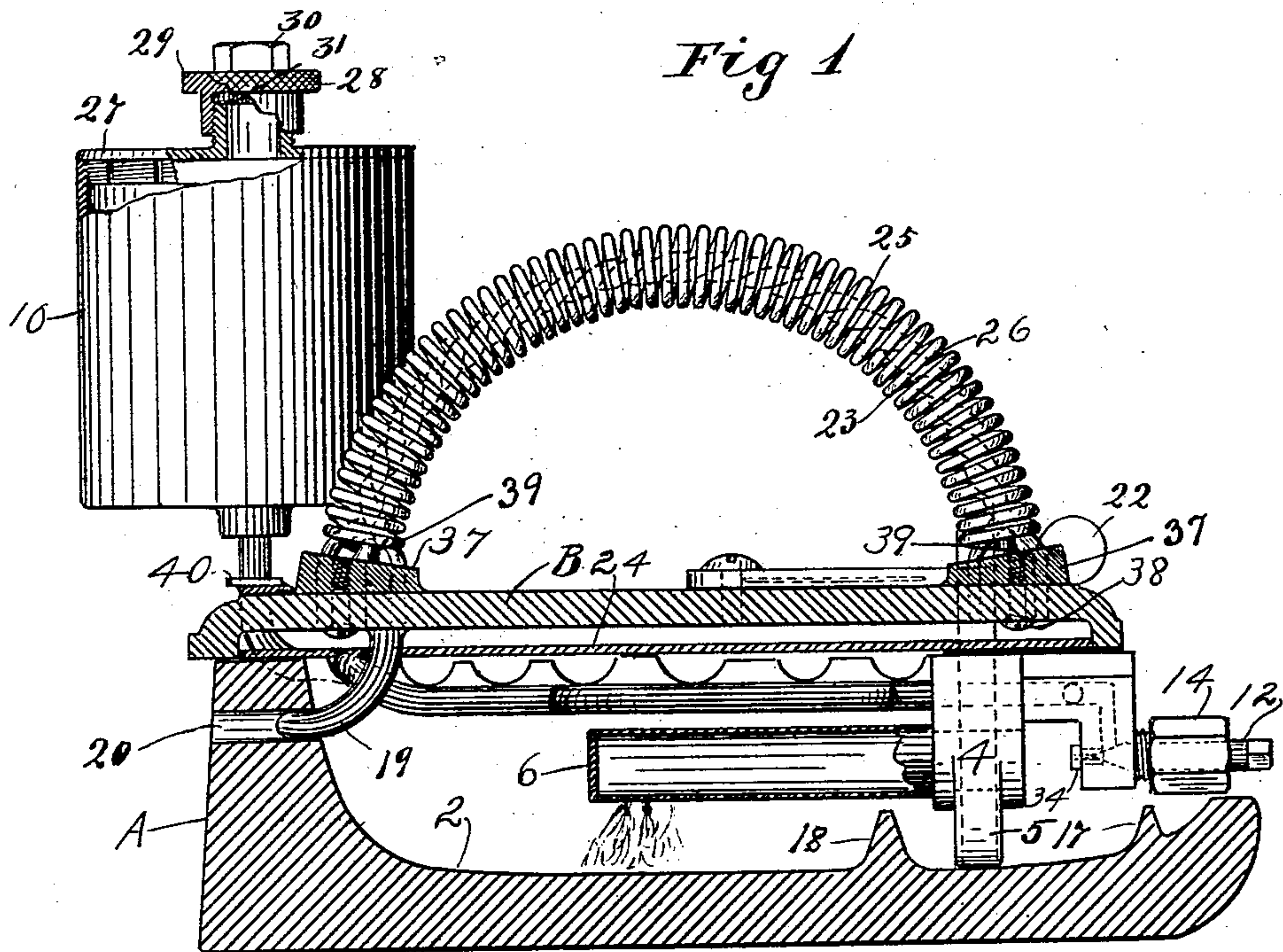
No. 751,156.

PATENTED FEB. 2, 1904.

H. A. FELTUS.
SELF HEATING SAD IRON.
APPLICATION FILED APR. 9, 1900.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses.
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Elgie M. Evans

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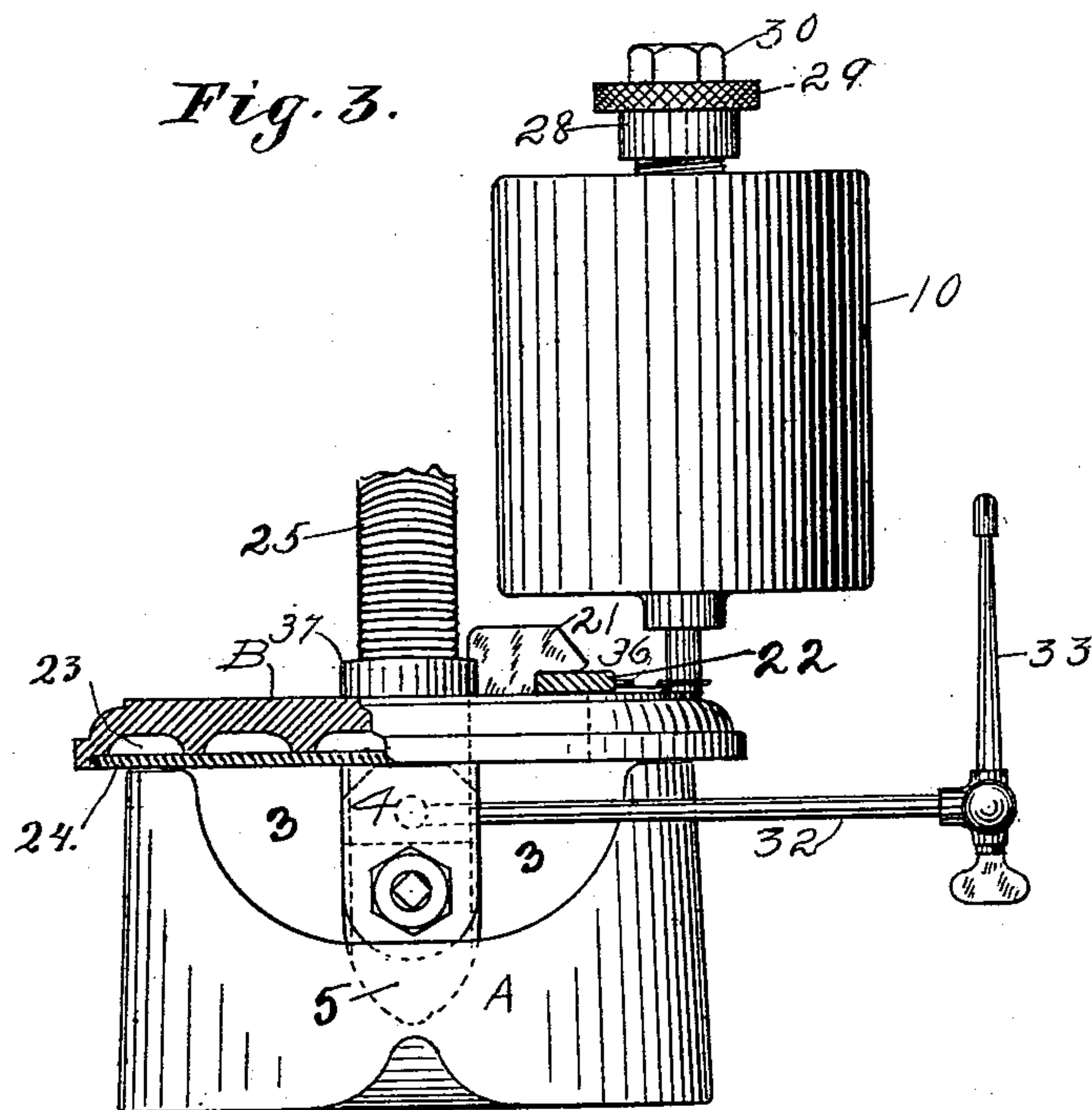
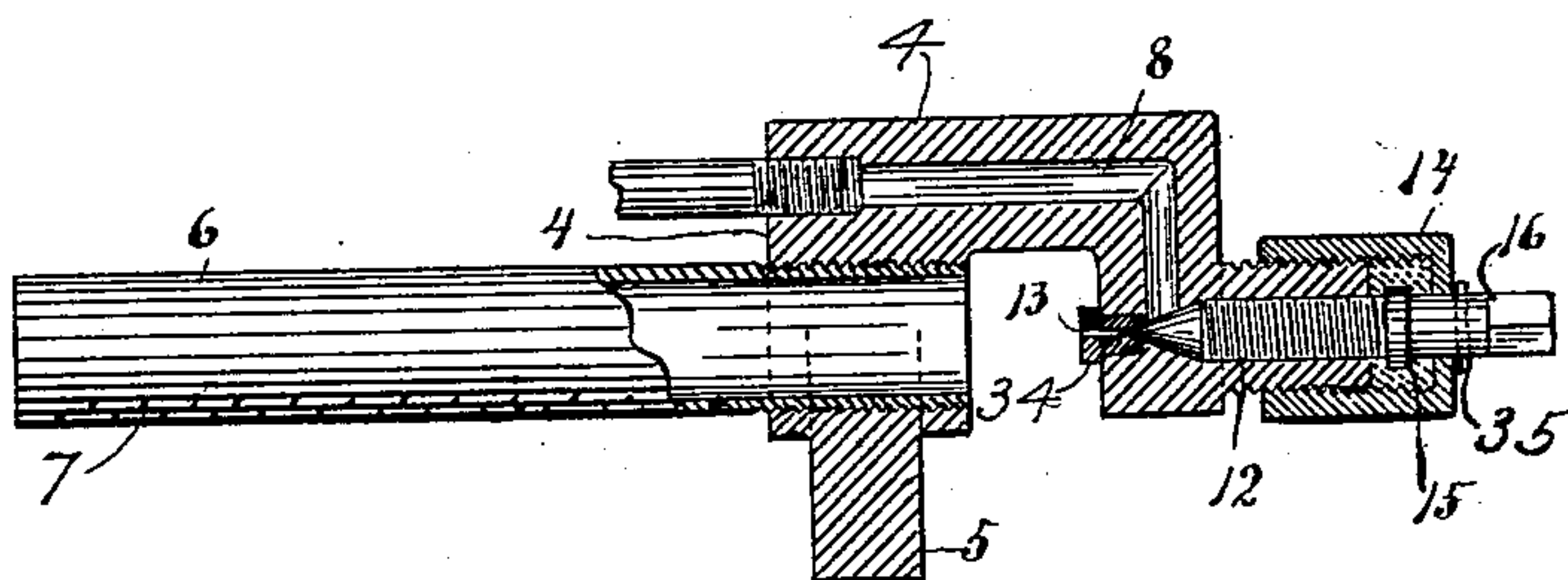


Fig. 4



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UNITED STATES PATENT OFFICE.

HENRY A. FELTUS, OF MINNEAPOLIS, MINNESOTA.

SELF-HEATING SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 751,156, dated February 2, 1904.

Application filed April 9, 1900. Serial No. 12 050. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. FELTUS, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Self-Heating Sad-Irons, of which the following is a specification.

My invention relates to improvements in heating apparatus of that class which embodies a gasoline tank and burner, the said improvements being particularly applicable to a gasoline-heated flat-iron.

The essential object of my invention is to improve the construction of this class of iron and to make the same more efficient than the ordinary construction; and to that end it consists in the novel features hereinafter particularly pointed out and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a longitudinal vertical section of my improved iron. Fig. 2 is a top plan view of the base with the top removed. Fig. 3 is a rear elevation, partly broken away; and Fig. 4 is a view of the gasoline-burner.

In the drawings, A represents the base portion of the iron of any desired shape, and B represents the removable top, which is detachably secured to the base, as hereinafter described. The base is formed with a cavity 2, across the rear end of which cavity extends the bridge-wall 3, formed with a central opening to receive the casting 4, which supports the gasoline-burner. The casting is formed with an extension 5, extending downwardly substantially to the bottom of the opening in the bridge-wall 3. Threaded in the casting 4 and projecting forwardly therefrom is a burner-tube 6, formed in its lower side with openings 7, which serve as jet-openings to direct the flame downward upon the bottom of the iron. A conduit 8 is formed through the casting, the forward end of said casting being connected by a tube 9 with the oil-tank 10, the tube passing through a notch 11 in the side of the flat-iron to said tank. The tube 9 is bent over the center of the cavity, as shown in Fig. 2. The rear end of the conduit 8, extending through the casting, is closed by a regulating-needle 12. A plug 34 is fitted in the wall of

the casting beyond the point of the needle and is provided with a hole 13, into which the point of the needle projects. As the opening through the plug is enlarged in use a new plug can be substituted. The needle 12 is threaded in the rear end of the casting 4, as shown in Fig. 4, and is further held in place by a packing-nut 14, threaded upon the rear of the casting 4, the needle being provided with an annular shoulder 15, adapted to bear against the inner side of the nut or intermediate packing and with a pin 35, adapted to bear against the outer side of the nut. The end of the needle is formed with a squared head 16 to receive a suitable key. Transverse ribs 17 and 18 extend upward from the base upon opposite sides of the bridge-wall to constitute a well to receive methylated spirits or other fluid to be ignited to vaporize the gasoline when the device is first used.

In order to detachably secure the cover B in position, I provide a curved finger 19, projecting forwardly from the under side of the lid or cover and adapted to project into an opening 20 in the forward end of the iron. I also provide a lug 21, projecting upwardly from one side of the bridge-wall and adapted to pass through a suitable slot in the cover, said lug being formed with a notched head, underneath which is adapted to be forced, by means of the spring 36, the end of the pivoted lever 22, as shown in Fig. 3. The under side of the lid or cover is formed with grooves 23, closed by the asbestos sheet 24. Openings are provided through the end of the cover to allow the outside air to pass into and circulate through the grooves, keeping the cover cool.

The handle of the iron preferably consists of a coil-spring 25, surrounding a cable 26, as shown in Fig. 1. The ends of the central cable are secured to castings 37, which castings are secured to the cover by screws 38. The castings are formed upon their upper sides with bosses 39, which fit inside the outer coil and hold the same in place.

In order absolutely to provide against explosion of the gasoline-holding tank, I form transverse grooves 27 through the threads of the top and bottom of the tank and in these grooves pour melted hard solder which runs

between the threads and makes a solid connection. The closing-cap 28 of the tank is formed with a milled flange 29 and also a head 30 to receive a wrench. Within the cap is placed
 5 a disk 31, of lead, which will be compressed when the cap is secured in place and form a tight joint. Cork or other elastic material will not answer the purpose, as the action of the gasoline will absorb and shrivel it and
 10 allow the gas to escape.

In order to enable the flat-iron to be used without the aid of extra light, I connect a tube 32 to the conduit 8, extending through the casing, and secure upon the end of said tube a
 15 jet 33. To assist in supporting the tank, I secure a bracket 40 to the cover engaging with the pipe leading from the tank.

Among the important features of my invention are—

20 First, the wells upon the sides of the bridge-wall to receive methylated spirits or other fluids to come directly under the generator.

Second, the construction of needle and means for holding it in place whereby the needle
 25 cannot be taken out without the packing-nut being taken off at the same time. Where the needle can be taken out and put in again, the packing is choked and is carried on the point of the needle into the small jet-opening, preventing the gas from escaping.

30 Third, the bend 9, connecting the burner with the tank. This bend 9 retards the flow of the gasoline over the flame in the bottom of the iron, causing complete generating of the
 35 gas and doing away with any bad odors.

Fourth, the improved construction of tank by which explosion is rendered impossible.

Fifth, the improved construction of tank cap, which is adapted to be used with either a key or wrench and is provided with a lead disk, which is compressed and prevents escape of gas. Yielding material, such as cork, will not accomplish this purpose.

I claim—

1. In combination with a heating apparatus, which includes a burner and connected tank suitably supported, a wall supported intermediate of said burner and tank, said wall being formed with channels in its under side, and an asbestos sheet secured to the bottom of said wall and bearing against the ribs separating said channels.

2. In a heating apparatus of the class described, generating means consisting of a burner and connected tank, a generator-tube, a casting attached to receive vapor from such generator, such casting having a vapor-passage terminating in a jet-orifice, a needle threaded into said casting to control the jet-orifice and having an annular flange on its stem exterior of said casting, and a packing-nut threaded on said casting and inclosing said annular flange.

3. In a heating apparatus of the class described, a gasoline-holding tank consisting of a circular wall, an end threaded therein, the threads upon said end being formed with transverse grooves to receive solder as set forth for the purposes set forth.

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

HENRY A. FELTUS.

Witnesses:

ELGIE H. EVANS,

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