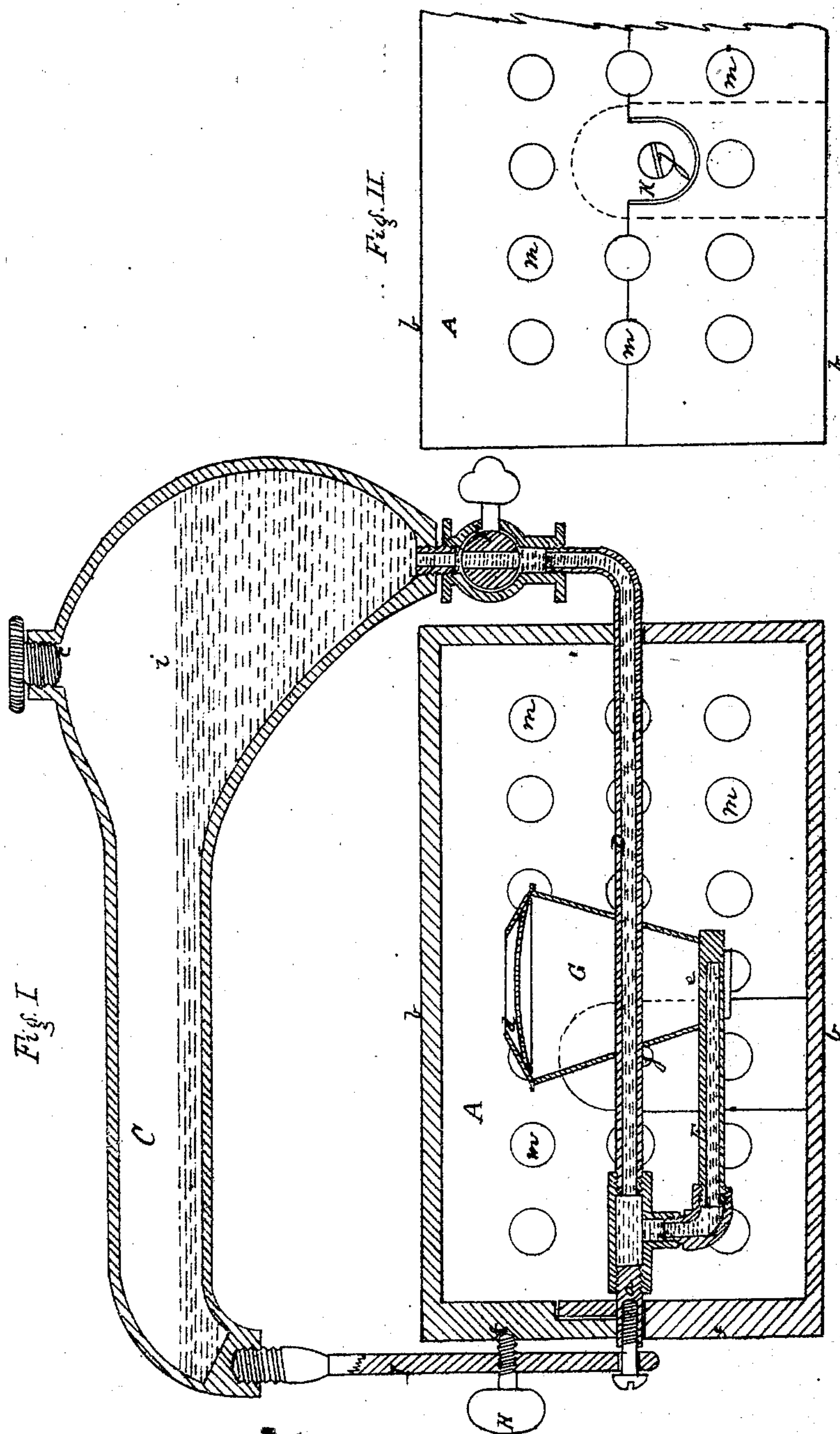


S. M. Johnson.
Reversible Sad Iron.
Nº 72047 *Patented Dec. 10, 1867.*



Witnesses
Jay Hoyatt.
L. F.

S. M. Johnson.
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Attys.

United States Patent Office.

S. M. JOHNSON, OF LOCKPORT, NEW YORK.

Letters Patent No. 72,047, dated December 10, 1867.

REVERSIBLE SAD-IRON.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, S. M. JOHNSON, of Lockport, in the county of Niagara, and State of New York, have invented a new and useful Improvement in Reversible Sad-Irons; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical section.

Figure 2 is a portion of the sad-iron, showing how the two parts are connected by ears and screws.

Like letters designate corresponding parts in both the figures.

The object of my invention is to furnish a single self-heating sad-iron that will do the work of a number of irons as are ordinarily constructed, and one that can be made available at all times, but especially in hot weather, without the use of a stove.

My invention consists in the combination and arrangement of a reversible self-heating sad-iron, with a hollow metal handle, which forms a reservoir for containing oil, or other fluid, by which the iron is heated, together with a pipe forming one of the legs of the handle and the axis of the iron, through which the oil is conducted to the interior of the sad-iron; also in combination therewith of the arrangement for heating the iron by generating and burning the vaporous products of the oil, as hereinafter fully set forth.

In the drawings, A represents a sad-iron with two smoothing-faces *b b*. C is a hollow handle, enlarged, so as to form a reservoir, *z*, therein for the oil or other fluid to be used, which is introduced through an opening, *e*, at the top. F is a stop-cock, for regulating the flow of the oil thence into D, which is an iron pipe running from the reservoir-handle to the interior, and through the centre of the iron, where it terminates, and is closed by a screw-plug, *a*, which extends through the iron to the outside, where the other leg I of the handle is attached in any suitable manner. This pipe forms the axis on which the iron turns while it is being reversed. Near the end of pipe D, on the under side, is attached a pipe, E, which extends to the centre of the iron, where it is provided with a small opening, *e*, at which the ignition of the oil takes place. On the pipe D is mounted, so as to slide thereon, an inverted cone, G, provided with a finely-perforated top, *d*, which is arranged, as shown, over the opening *e*, after the oil has been ignited. H is a set-screw in the leg I, the end of which fits in indentations *ff* in the iron, when the latter has been adjusted in either of the required positions, securely holding it in place. The sad-iron is cast in two pieces, with holes *m m* in the sides for the supply of air, and are secured together by ears K K and screws *jj* on each side, which parts can be separated, when desired.

The operation of my improvement is as follows: The oil or other liquid being let through stop-cock F into pipes D and E, it is ignited at *e*, and the cone arranged in position over the same. The flame in a few seconds heats the pipe D, above, sufficiently to cause the generation of gas or vapor from the liquid therein, which flows through pipe E, and escapes through burner *e* into the cone above, where it is ignited at the top of the same, when the iron is ready to be put together. A few minutes longer suffices to heat the upper face of the iron, when it is ready for operation; the iron being reversed from time to time, as required, by releasing the set-screw H, as above described.

The advantages of my improvement are, its compactness and simplicity; the saving of fuel by dispensing with the use of a stove, which, in warm weather, is a source of great discomfort from the excessive heat that is thereby produced; economy in the number of irons required, as a single one of my improved kind suffices for each operator, instead of several, as ordinarily required.

The arrangement of pipes D and E, with the use of the cone G, by which the hydrocarbon liquid is vaporized before it is burned, renders the combustion more perfect, avoiding the smoke and disagreeable smell which would result from burning the liquid by means of a wick, in the usual manner.

What I claim as my invention, is—

1. The combination, with a reversible sad-iron, A, of the hollow handle C, forming a reservoir, *z*, the pipe D, leg I, and set-screw H, or equivalent, arranged and operating substantially in the manner and for the purpose set forth.

2. I also claim, in combination therewith, the pipe E, provided with burner *e*, cone G, and stop-cock F, arranged and operating substantially as specified.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

S. M. JOHNSON.

Witnesses:

P. A. GREENWOOD,
CHARLES WELLS.