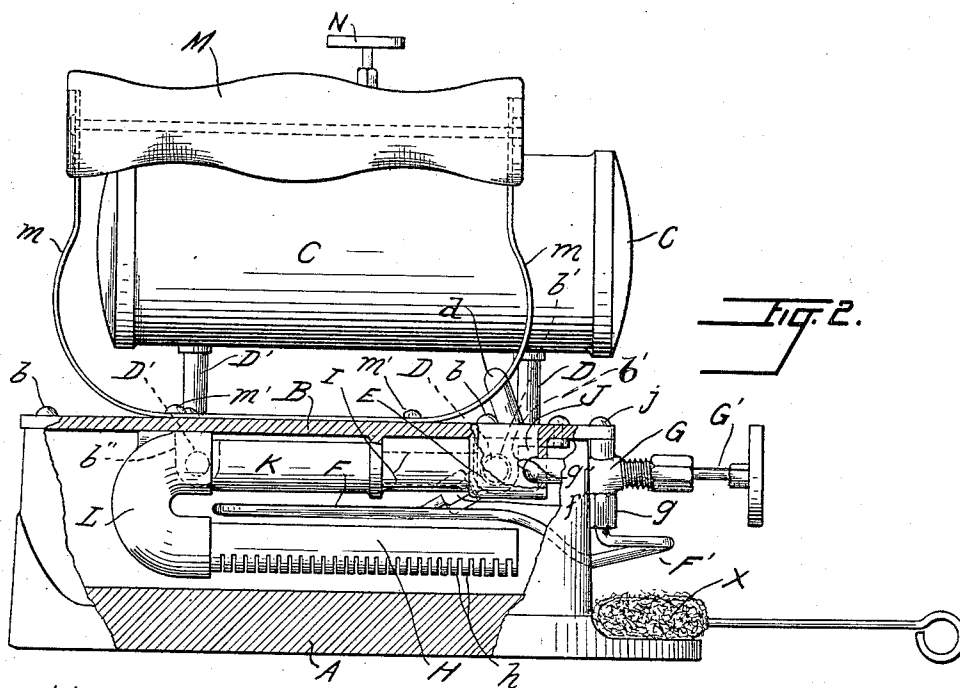
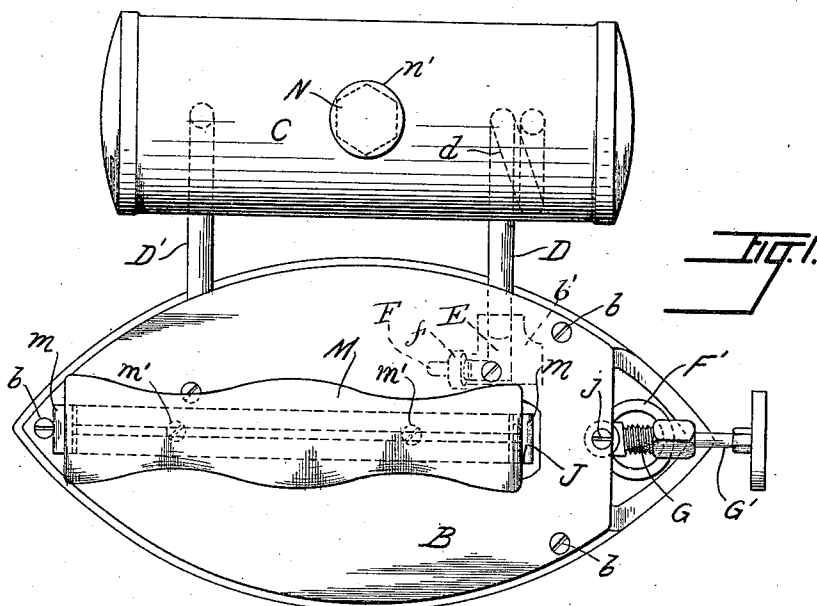


H. C. HANSON.
SELF HEATING SAD IRON.
APPLICATION FILED NOV. 27, 1911.

1,043,421.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 1.



WITNESSES:

W. C. Adams
W. C. Adams

INVENTOR

Hans C. Hanson
Hans C. Hanson,

BY

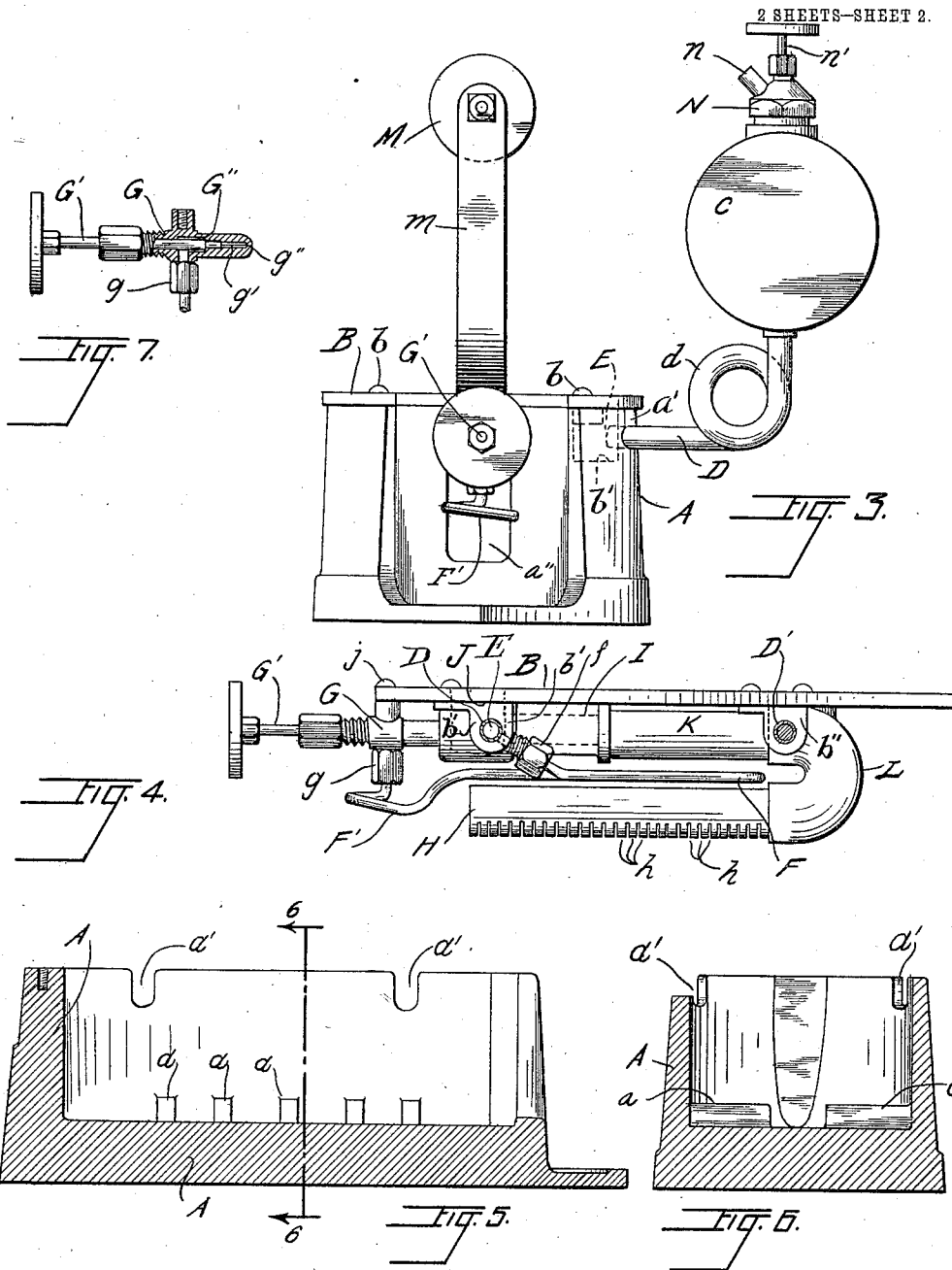
Charles Turner Brown
Charles Turner Brown,
ATTORNEY

H. C. HANSON.
SELF HEATING SAD IRON.
APPLICATION FILED NOV. 27, 1911.

1,043,421.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 2.



WITNESSES:

W. Brown
J. A. Adams

INVENTOR
Hans C. Hanson
BY
Charles Turner Brown,
ATTORNEY

UNITED STATES PATENT OFFICE.

HANS C. HANSON, OF ALBERT LEA, MINNESOTA.

SELF-HEATING SAD-IRON.

1,043,421.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed November 27, 1911. Serial No. 662,734.

To all whom it may concern:

Be it known that I, HANS C. HANSON, a citizen of the United States, residing at Albert Lea, in the county of Freeborn and State of Minnesota, have invented certain new and useful Improvements in Self-Heating Sad-Irons, of which the following is a specification.

This invention relates to sad irons which are heated by the combustion of gasolene within a chamber provided therefor in the body thereof.

The objects of this invention are to obtain a simply constructed device containing a gasolene burner which can be quickly ignited, and which is not liable to get out of order; a device which comprises a gasolene receptacle positioned so as not to obstruct the view to the user thereof, of the contour of the iron, and to obtain a device in which no circulation of the gasolene used for fuel can occur, and in which the combustion (and resulting heat) will be uniform.

Additional objects sought are hereinafter specifically set forth and claimed.

In the drawings Figure 1 is a top plan view of the device embodying this invention. Fig. 2 is a side elevation with a section of the shell of the device removed showing the interior construction thereof. Fig. 3 is a rear end elevation. Fig. 4 is a side elevation of the generator and adjacent parts, including the top of the shell. Fig. 5 is a vertical longitudinal section of the base of the device, and Fig. 6 is a vertical section on line 6—6 of Fig. 5, viewed in the direction indicated by the arrows. Fig. 7 is a section of the vapor supply valve which forms an element of the device.

Similar letters refer to similar parts throughout the several views.

A is the base and shell of the device.

a , a , are ribs on the floor of shell A; a' are recesses in the upper edge of said side walls and a'' is a recess in the rear end wall of shell A. Recesses a' , and a'' form apertures through the shell A when the cover or top thereof is in place thereon.

B is the top of the shell A and is attached to said shell by means of screws b , b .

C is a gasolene supply tank which is secured above and to one side of shell A and top B, by means of pipes D, D', which are secured at their upper ends to said tank and at their lower ends in lugs or abutments b' ,

b'' , on the under side of top B. Pipe D is provided with the coil d and said pipe is in communication at its upper end with the supply tank C and at its lower end with passage way E in abutment b' on top B, and forms the fuel supply pipe of the device.

F is the generator of the device. Generator F is attached to the abutment b' by union f and to the valve casing G by union g .

G' is the valve in casing G and g' is a needle fitting discharge aperture g'' . Needle g' is secured on the end of valve G', (see Fig. 7).

G'' is the seat of the valve G'.

H is the burner of the device and is provided with apertures h from which the gas flows as it is consumed.

I is a passage way the walls whereof form a tube and are integral with top b and J is an aperture in top B, at the end of the passage way I, which is adjacent to discharge passage way g'' of valve casing G. j is a screw by means of which the valve casing G is secured in place on top B so that the discharge passage way g'' is co-axial with the passage way I. By this construction passage way I in combination with the discharge passage way g'' and the air inlet J, forms a Bunsen tube, or gas and air mixer and K, L, (see Figs. 2 and 4) are mixing chambers into which the Bunsen tube discharges. The burner H is in communication with the mixing chamber L.

It will be observed that the greater part or portion of the generator F is positioned above the burner H and that said generator is continued beyond said burner toward the rear of the device and out through recess a'' , (lettered F'), as is particularly illustrated in Figs. 1, 2 and 4. The positioning of the part of the generator which is placed above the burner H is to obtain continuous generation of gas in the operation of the device and the positioning of the part F' of said generator at the rear end of the device, beyond the burner H, is to permit the insertion of the asbestos torch X thereunder to generate gas and start the device into operation. I find by this construction a very brief space of time, substantially one minute, is sufficient to generate gas and start the device into operation.

M is the handle of the device which is

grasped by the operator thereof. Handle M is attached to the top B by connection *m* and screws *m'*.

N is a removable cap to reservoir C, closing the aperture by means of which gasoline is supplied to said reservoir, and *n*, Fig. 5, is a check valve in cap N through which air is forced into the reservoir to obtain the desired pressure on the gasoline.

n' is a needle valve which is opened to admit air to the reservoir through check valve *n* and closed after sufficient air is forced in said reservoir.

Cap N, check valve *n* and needle valve *n'* are the usual construction of said parts.

It will be observed that the forward end of valve casing G is inserted in an aperture provided therefor in the rear wall of the air inlet J. The continued alinement of discharge aperture *g''* with passage way I is thus preserved.

The coil *d* in supply pipe D is to prevent circulation of gasoline through said supply pipe and the reservoir or tank C when the generator is in operation.

To assemble the device the several parts are attached to the under side of top or cover B, and said cover is laid on the remainder of the base or shell A, with pipes D D' in the apertures formed by the recesses *a' a'*, which are illustrated in Fig. 4, and said top is then secured to said base by screws *b*.

To start the device into operation gasoline is put into tank C, and a pressure is put thereonto by forcing air through the check valve. Valve G' is then opened, the torch X is saturated with gasoline, and held under the part F' of the generator. A gas is generated which is forced through the mixer of the device, through the mixing chambers K, L, and through the burner H and said gas is ignited as it flows from apertures *h*. The valve G' is opened to obtain the necessary flame to properly heat the base of the sad iron.

I claim:—

1. In a self heating sad iron, a shell comprising a base and side walls, and an end wall and having a detachable top, the side and end walls respectively provided with apertures therethrough and the top provided with projecting lugs on the underside thereof, a valve casing attached to the underside of said top, a tube integral with the top and a mixing chamber attached to and supported by said tube positioned on the under-side of the top, a valve in the valve casing co-axial with the tube, said top provided with an aperture therethrough communicating with said tube to form an air inlet thereto, and a burner attached to the discharge end of and communicating with the mixing chamber, said burner provided with apertures therethrough, a gas gener-

ator within the shell and adjacent to the burner, said generator communicating with the valve casing and the discharge of gas therefrom controlled by said valve, and means to supply gasoline to said generator.

2. In a self heating sad iron, a shell comprising a base, side walls, an end wall and having a detachable top, the side and end walls respectively provided with apertures therethrough, a tube and a valve casing respectively attached to the underside of said top, a valve in the valve casing co-axial with the tube, said top provided with an aperture therethrough communicating with said tube to form an air inlet thereto, a mixing chamber and a burner attached to said tube and said tube communicating with the mixing chamber, and said burner provided with apertures therethrough, a gas generator within the shell and adjacent to the burner, said generator extending beyond the burner and through the aperture in the end wall, and from thence back to and communicating with the valve casing and the discharge of gas therefrom controlled by said valve and means to supply gasoline to said generator.

3. In a self heating sad iron, a shell comprising a base and side walls, an end wall and having a detachable top, the side and end walls respectively provided with apertures therethrough and the top provided with projecting lugs on the underside thereof, a valve casing attached to the underside of said top, a tube integral with the top and a mixing chamber attached to and supported by said tube and positioned on the under side of the top, a valve in the valve casing co-axial with the tube, said top provided with an aperture therethrough communicating with said tube to form an air inlet thereto, and a burner attached to the discharge end of and communicating with the mixing chamber, said burner provided with apertures therethrough, a gas generator within the shell and adjacent to the burner, said generator, extending beyond the burner and through the aperture in the end wall, and from thence back to and communicating with the valve casing and the discharge of gas therefrom controlled by said valve, and means to supply gasoline to said generator.

4. In a self heating sad iron, a shell comprising a base, side walls, an end wall and a top, said top attached to said side walls, the side and end walls respectively provided with apertures therethrough, a tube and a valve casing respectively attached to the underside of said top, a valve in the valve casing co-axial with the tube, said top provided with an aperture therethrough communicating with said tube to form an air inlet thereto, a mixing chamber and a burner attached to said tube and said tube communicating with the mixing chamber, and said burner provided with apertures therethrough, a gas

generator within the shell and adjacent to the burner, said generator communicating with the valve casing and the discharge of gas therefrom controlled by said valve, a
5 fuel reservoir, means to attach said reservoir above and to one side of the shell, said means comprising a pipe provided with a coil and communicating with the reservoir and with the generator.

HANS C. HANSON.

In the presence of—

CHARLES TURNER BROWN,
CORA A. ADAMS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."