R. HILDEBRAND.

SELF HEATING FLAT IRON.

APPLICATION FILED APR. 18, 1910.

1,008,335.

Patented Nov. 14, 1911.

Fig. 1.

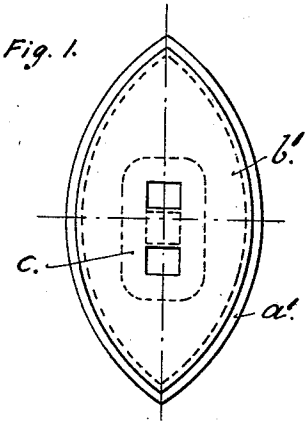


Fig. 2.

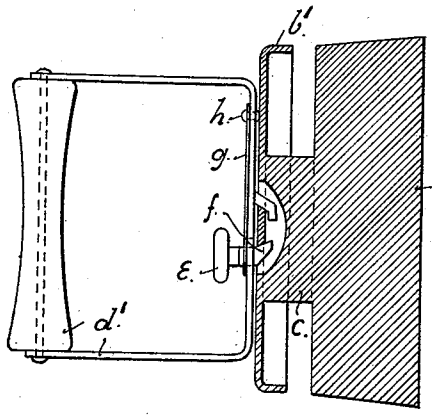
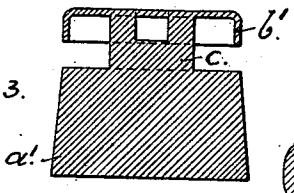


Fig. 3.



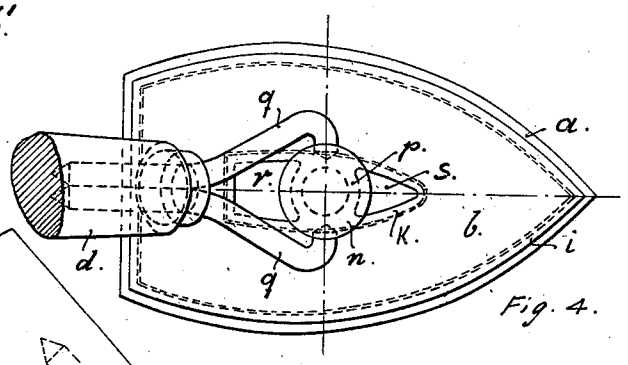


Fig. 4.

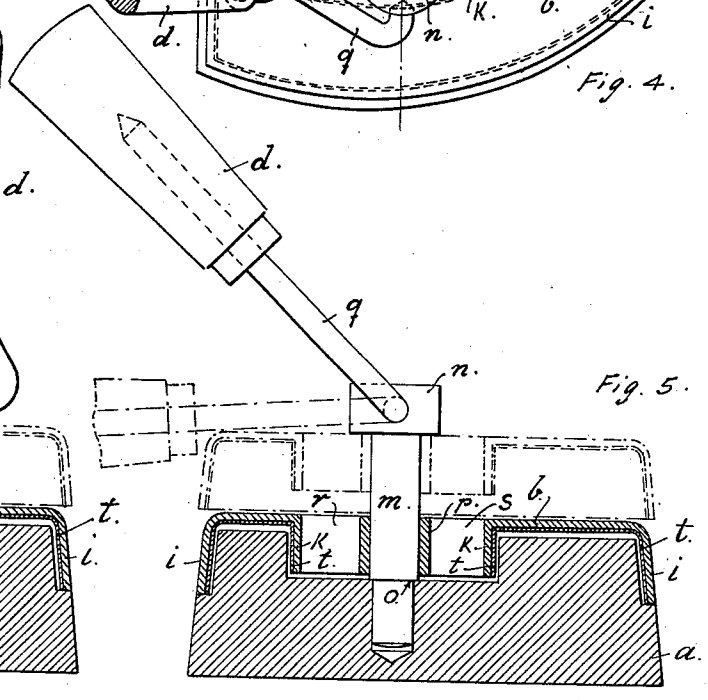
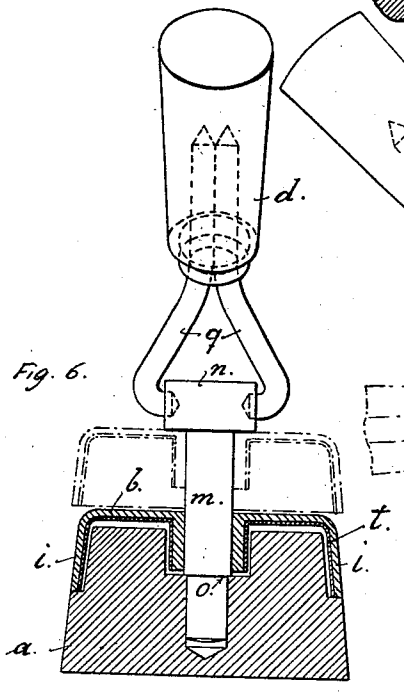


Fig. 5.

Fig. 6.



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REINHARD HILDEBRAND, OF MILWAUKEE, WISCONSIN.

SELF-HEATING FLAT-IRON.

1,008,335. Specification of Letters Patent. Patented Nov. 14, 1911.

Application filed April 18, 1910. Serial No. 556,207.

To all whom it may concern:

Be it known that I, REINHARD HILDEBRAND, a citizen of Germany, residing at Milwaukee, in the county of Milwaukee and the State of Wisconsin, have invented a new and useful Improvement in Self-Heating Flat-Irons, of which the following is a specification.

My invention relates to improvements in self-heating flat irons and has for its object to provide a flat iron, with a fuel receptacle attached to and movable with respect to the main body portion of the iron, said receptacle being adapted to extend beneath the main body portion of the iron when the latter is inverted, and to be filled with liquid fuel, such as alcohol or a similar fuel, which will heat the iron when ignited.

In the accompanying drawings Figure 1 is a plan view of an iron constructed in accordance with my improvements, with the handle removed; Fig. 2, a view in vertical longitudinal section taken through the center of Fig. 1, and showing the handle in elevation; Fig. 3, a view in transverse vertical section of the iron shown in Fig. 1, taken through the transverse center of said Fig. 1; Fig. 4, a plan view of an iron constructed in accordance with my improvements, and showing my preferred form, with the handle in elevation; Fig. 5, a view in vertical longitudinal section, taken through the center of Fig. 4, and showing the fuel receptacle or cap in full lines with its outer rim in engagement with the main body portion of the iron, and forming a closed, asbestos lined cover for the latter—and showing the fuel receptacle in broken lines with the outer rim out of engagement with the main body portion of the iron and in position to contain fuel and admit air between the rim and main body portion—the handle being shown in elevation in raised position in full lines, and in lowered position in broken lines; and Fig. 6, a view in transverse vertical section, taken through the center of Fig. 4, showing the handle in elevation.

In Figs. 1, 2, and 3, a' represents the main body portion of a flat iron, b' a fuel receptacle or cap, c a separator or distance piece, by which the cap b' is held in position with respect to the main body portion of the flat iron, with the outer rim of the cap or fuel receptacle out of contact with said body portion and in position to provide an unobstructed space between the outer rim and the main body portion of the iron throughout the entire circumference of the cap or fuel receptacle, for admitting air to the fuel contained in the receptacle when the iron is in inverted position. The handle d' shown in Fig. 2, may be removed by lifting the knob e, and simultaneously the wedge f, both being fastened to a spring g, which is shown as riveted at the point indicated by the reference letter h to the handle d'. The handle is thus adapted to be removed when the iron is to be heated. The iron may then be inverted, in which position the cap or fuel receptacle will be beneath the main body portion of the iron, with an unobstructed space between the rim of the fuel receptacle and the main body portion of the iron throughout the entire circumference of the outer rim—the fuel receptacle or pan and the main body portion of the iron being connected wholly by means of a central distance piece or stem c, so as to leave the entire outer circumference of the receptacle or cap entirely unobstructed for freely admitting air to the fuel. The pan or receptacle may then be filled with alcohol or other liquid fuel, which, after being ignited will burn along the whole circumference of the flat iron and fuel receptacle, thereby heating the flat iron. The iron, after being heated, is turned right side up, ready for use, in which position the cover formed by the fuel receptacle or cap, serves to reduce the radiation or loss of heat.

The loss of heat or radiation of heat from the main body portion of the flat iron is reduced to a minimum by constructing the cap or fuel receptacle and main body portion of the iron as shown in Figs. 4, 5, and 6, and as hereinafter described, in which preferred form the cover is lined with asbestos and forms a closed chamber above the main body portion of the iron when the latter is upright.

In a flat iron constructed as shown in Figs. 4, 5, and 6, "a" represents a flat iron, "b" a cap resting on the flat iron "a." The cap "b" has an outer and an inner rim "i" and "k" respectively, and is lined with asbestos indicated by "t." A bolt "m" with flatted head "n" and shoulder "o" fits loosely through a hole drilled through the flange "p" which is a part of the cap "b." The bolt "m" is driven tight or screwed into the flat iron "a." A handle "d" is pro-

vided, which by means of two round spring wires "*q*," inserted in two holes drilled in the bolt head "*n*" can be swung upward to a position suitable for ironing, and downward to the position indicated in broken lines in Fig. 5, in order to enable the iron to be supported in inverted position with the fuel receptacle beneath the main body portion and in position to contain liquid fuel. The position shown in full lines in Figs. 4, 5, and 6 represents a position suitable for ironing. In order to heat the iron the handle will be swung to the position shown in broken lines in Fig. 5, and the whole iron is laid upside down on the table, resting on the flat surface of a suitable supporting element, such as the bolt head "*n*." The cap "*b*" will then come into the position shown in broken lines in Figs. 5 and 6, so that when the iron is inverted the cap will rest on the bolt head "*n*." The cap "*b*" forms a pan to be filled with alcohol or similar fuel. After igniting the alcohol, the fuel will burn along the whole outer circumference of the rim "*k*," and all over the surface of the alcohol in the pan, and also along the whole inner circumference of the rim *i*. Air is admitted to the inner part of the flame through the holes "*r*" and "*s*" located in the center of the cap. The flame is so distributed as to enable the flat iron "*a*" to be heated throughout. An asbestos lining "*t*" is desirable although it is not indispensable, as it acts as a wick while the flat iron is heated, and acts as a protector against loss of heat while ironing, that is, when the cap is resting on the flat iron "*a*."

I claim—

1. A flat iron comprising in its construction a main body portion, a cap provided with an outer rim forming a chamber in the cap for containing liquid fuel, and a stem connected with the central portion of the cap and with the main body portion of the flat iron, for holding the cap in position with respect to the latter.

2. A flat iron comprising in its construction a main body portion, a cap provided with a central opening therethrough, a rim on the cap forming a chamber for containing liquid fuel, and means for connecting the central portion of the cap with the main body portion of the flat iron.

3. A flat iron comprising in its construction a main body portion, a cap provided with a central opening therethrough, an inner rim on the cap adjacent to the central opening, an outer rim encircling the inner rim and forming a chamber for containing liquid fuel, and a stem extending through the central opening in the cap and forming a connection between the cap and the main body portion of the flat iron.

4. A flat iron comprising in its construction a main body portion, a cap provided with a central opening therethrough and adapted to form a chamber for containing liquid fuel, and means for connecting the cap in movable relation to the main body portion of the flat iron.

5. A flat iron comprising in its construction a main body portion, a cap provided with a central opening therethrough, a rim on the cap adapted to form a chamber for containing liquid fuel, a central stem extending through the central opening in the cap and secured to the main body portion of the flat iron, and a shoulder upon the stem adapted to engage the cap and form a support therefor when the flat iron is in inverted position.

6. A flat iron comprising in its construction a main body portion, a cap, and means for connecting the cap in movable relation to the main body portion of the flat iron, and adapted to support the cap a predetermined distance from the main body portion when the latter is in inverted position, said cap being provided with a chamber for containing liquid fuel.

7. A flat iron comprising in its construction a main body portion, a cap forming a chamber for containing liquid fuel, and means for supporting the cap and base a predetermined distance from each other when the flat iron is in inverted position.

8. A flat iron comprising in its construction a main body portion, a cap provided with a chamber for containing liquid fuel, and having a central opening through the cap, means for supporting the cap and main body portion a predetermined distance from each other when the flat iron is in inverted position, and an asbestos lining on the inner side of the cap.

9. A flat iron comprising in its construction a main body portion, a cap provided with a chamber for containing liquid fuel, an asbestos lining for the chamber, a handle, and means for supporting the cap and main body portion a predetermined distance from each other when the flat iron is in inverted position.

10. A flat iron comprising in its construction a main body portion, an asbestos-lined cap forming a receptacle for containing liquid fuel, and provided with a central opening through said cap for admitting air to the fuel, and means for supporting the cap in position to form a space between the outer portion of the cap and the main body portion of the flat iron.

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Witnesses:
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