This invention relates to improvements in self-heating sadirons, particularly of the type which is heated by the combustion of gasoline or other combustible fluid, although certain features of the invention may be extended to the construction of irons heated by electricity.

One of the objects of the invention is to provide an iron of the type heated by gasoline or the like so that the iron may be placed on end or in raised position when not in use. Herefore irons heated by gasoline were provided with a reservoir carried on the rear of the iron which prevented it from being turned up when out of use temporarily. The usual electric irons are provided with an attached bracket which serves as a stand upon which the iron rests, and it is one of the features of the invention to construct an iron of the gasoline heating type which can be set up in similar fashion during a pause in the ironing. This purpose makes it essential that the construction and organization of the iron be completely changed and modified.

Another purpose of the invention is to provide a new and improved construction by which the needle may be removed quickly and easily for the purpose of cleaning.

Further objects are an improved organization whereby the handle is insulated from the body of the iron, and the construction and mode of attachment of the base to the body whereby it can be easily removed and reattached so that the inner or working parts of the iron are readily accessible for inspection and cleaning, and further so as to enable this element to be plated and finished separately from the body.

These and other objects and advantages will become evident from the detailed description and drawings which show the best known or preferred form of the invention, it being understood that changes and modifications may be made therein, within the scope of the invention as set forth in the claims.

In the drawings,

Figure 1 is a side elevation of the improved iron, the handle being shown in vertical cross-section;

Figure 2 is a plan view of the iron;

Figure 3 is a vertical transverse section on the line 3—3 of Figure 1, looking toward the rear of the iron;

Figure 4 is a similar section on the line 4—4 of Figure 1, looking toward the front of the iron;

Figure 5 is an enlarged detail section of the feeder and vaporizing tube;

Figure 6 is a detailed section of the handle attachment on the line 6—6 of Figure 1;

Figures 7 and 8 are detailed views of the attachment of the handle and reservoir;

Figure 9 is a detailed section of the mixing chamber;

Figure 10 is a detail of valve-control handle on the line 10—10 of Figure 5.

Figure 11 is a detail sectional view of the reservoir shown without supporting bosses.

The iron comprises a main casting or body which is of the usual shape of a sadiron and is hollow to accommodate the burner. On the inner forward end of the body is a pin 2 and on the rear of the body is a fastening screw or pin 3. The base of the iron is indicated at 4 and is provided with an upstanding flange 5, which, with the hollowed out central portion 6 of the base constitutes a chamber in which combustion occurs. The flange serves as a shield about the flame from the air entering the chamber through openings 8 in the lower edge of the body. The front of the flange is formed with a slot or recess to receive the pin 2. The rear of the flange is provided with a threaded hole to receive the screw 3. By withdrawing the screw the base can be removed from the body, there being enough play between the body and the base to free the pin 2. By constructing the base so that it is easily removed and replaced the interior of the iron may readily be inspected and cleaned. Furthermore it is possible to electroplate and finish the base as a separate element, thereby improving and cheapening the manufacture of the iron.

The handle is indicated, as a whole, by the numeral 18 and consists of a wooden grip element 16 which is hollow throughout to accommodate a filling tube 17 accessible at the forward end and closed by a cap 18, the interior of which is screw threaded to fit over the enlarged screw threaded end of a removable plug 20, the inner end of which is reduced and screwed into the tube. A nut 21 surrounds the plug and serves to hold in position a block of heat insulating material 22 which is set in a recess in the forward end of the handle. Mounted in the plug and held in position by the cap 18 is a valve member 24 containing a usual ball valve or the like, the outer end of the valve being provided with a flange contacting a seating gasket 25. In the outer end of the valve member is a plug or stopper 26 having an angulated passage through which air, under pressure, may be introduced into the reservoir. The inner end of the plug is ground to make a...
the iron is in upright position as it takes fuel from the deepest point in the fount when the iron is standing in idle position.

The coupling is formed with a through passage restricted at 52 to provide at least one seat in the valve member. The rear of this seat is a screw-threaded valve 54, the fuel passing around the threads and through the valve, which is adjusted so as to regulate the flame. The valve is extended rearwardly and provided at its rear end with a collar 55 to which a packing gland 58 is secured. A plug 57 and packing glands 59 surround the valve and make a fluid tight seal at this point.

To the forward end of the coupling 48 is screwed a thimble 60 in which is soldered the vaporizer tube 61 which extends to a point near the front of the fount where it discharges into a mixer to be described later. The discharge end of the vaporizer tube is closed by a diaphragm 62 in which is located the capillary opening through which the fuel is discharged. The needle 65 extends through the vaporizer tube and is shown broken down to me to the present construction is the first by which it is possible to do this with an iron heated by liquid fuel.

The rear face of the reservoir, as shown, inclines outwardly and downwardly and is provided at its lower rear edge with a flange 31 which is at right angles to the axis of the iron. Near the top of the reservoir are two studs 32 which with the flange form a rest upon which the iron may be placed while temporarily out of use. It is obvious that this particular arrangement and design is not essential and that the side of the reservoir may be flat, as shown in Figure 11, or other means provided whereby the iron may be rested in tilted or upright position. The position of the reservoir assures the substantially upright position of the iron. Housewives are apt to forget to place the iron on a stand and thus may overheat the clothes or ironing board. By redesigning the iron and altering the usual and accepted construction of irons of this type so that it may be stood in the manner described the sadiron of the old type is greatly improved.

The handle and reservoir are secured to the base by a single curved strap 35, the forward end of which is bent upwardly and received in the insulation plate 22. The central portion of the strap is received on two posts 36 rising from the body 1 and having free parts 37 at the front and a short screw 38 at the rear. The long screw serves as a means for holding the burner and mixing chamber in position. The rear end of the strap is offset and notched as at 40 with a keyhole shaped slot to be received over a screw threaded post 41 on the underside of the reservoir, a nut 42 being received over the post and having a circular extension received in the enlarged bore of the slot 40. By the construction described, the handle and reservoir are adequately insulated from the hot body of the iron, and the reservoir serves as a connector between the handle and body of the iron.

At one side of the lower end of the reservoir or fount 30 is located the discharge opening 45 which is preferably formed as a depressed boss in which is received the upsetting feed pipe 46 formed as a branch of the T-shaped coupling 48. A threaded sleeve 49 and gasket 50 resting against a flange 51 on the pipe 46 hold the coupling in place.

An elbow 55 which extends at its open end to the base of the fount conducts the fuel to the outlet. This assures the feed to the burner when the iron is in upright position as it takes fuel from the deepest point in the fount when the iron is standing in idle position.
having a body, a handle, a reservoir forming a connection between the body and the handle, and means for supporting the iron located solely upon the reservoir.

2. A self-heating iron of the fluid burner type comprising a body, a burner within the body, a handle, a reservoir at the rear of the iron and forming a connection between the body and the handle, iron rests formed upon the reservoir, a feed pipe leading from said reservoir to said burner, and an elbow disposed within said reservoir to supply fuel to said feed pipe from approximately the lowest point in the reservoir both in normal position and also when upon the rests.

3. A self-heating sadiron comprising a body, a fluid burner located within the body, a handle, an enlarged reservoir for holding liquid fuel under pressure located at the rear of the iron and connecting the handle and the body, iron rests upon the reservoir adapted to support the iron when the body is elevated, and a fuel supply pipe leading to the burner from substantially the lowermost point of the reservoir in either operating or elevated position of the iron body.

4. A self-heating sadiron comprising a body, a fluid burner located within the body, a handle, an enlarged reservoir for holding liquid fuel under pressure located at the rear of the iron and connecting the handle and the body, the rear face of the reservoir being inclined downwardly and rearwardly, iron rests upon the rear face of the reservoir adapted to support the iron when the body is elevated, and a fuel supply pipe leading to the burner from substantially the lowermost point of the reservoir in either operating or elevated position of the iron body.

5. In a sadiron, a body, a liquid fuel burner in the body, a handle, and an enlarged reservoir located at the rear of the iron and extending between the handle and the body and extending rearwardly of the body, the rear face of the reservoir being substantially flat and adapted to form an iron rest when the body is elevated.

6. In a sadiron, a body, a liquid fuel burner in the body, an enlarged reservoir located at the rear of the body adapted to hold fuel under pressure, the rear face of the reservoir serving as a support for the iron when the body is elevated, and a feed pipe leading from substantially the lowermost point in the reservoir in either position of the iron and delivering to the burner.

7. In a sadiron, a body, a liquid fuel burner in the body, an enlarged unitary reservoir located at the rear of the body, a handle connected to the upper end of the reservoir, a reservoir feed pipe extending longitudinally through the handle, a strap, the ends of which are connected to the base of the reservoir and the end of the handle, and means located immediately of the strap to support the iron body.

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