To all whom it may concern:

Be it known that I, JULIUS JACOB CZEPUll, of Charleston, in the county of Charleston and State of South Carolina, have invented a new and Improved Self-Heating Sad-Iron, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved self-heating sad-iron, which is simple, durable in construction, and quickly and uniformly heated by the use of gasoline or like substance carried in the sad-iron.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a central longitudinal section of the improvement. Fig. 2 is a sectional plan view of the same on the line x x of Fig. 1. Fig. 3 is a vertical cross-section of the same on the line y y of Fig. 2; and Fig. 4 is an end elevation of the improvement.

The improved self-heating sad-iron is provided with a hollow bottom part, A, having a removable top plate, B, in which are formed a number of apertures, B', for the admission of air, and like apertures, A', are formed in the sides and top of the hollow body A for the same purpose. On the ends of the body A are secured the reservoirs C and D, in which the gasoline to be used in the sad-iron is stored. The reservoirs C and D are connected with each other near their bottoms by a pipe, F, and a similar pipe, E, connects the said reservoirs near their tops. A handle, G, is formed around the pipe E. In the top of the reservoir C is an inlet-opening, C', for filling the reservoirs C and D with gasoline or other like substance, and the opening C' can be closed by a screw-cap, II.

From the lower part of the reservoir D leads a horizontal pipe, I, to a chamber, J, formed in the lower end of the reservoir C and in the top part of the body A. The chamber J is not connected directly with the reservoir C, but indirectly through the pipes I and F and the reservoir D. From the chamber J leads a horizontal pipe, K, which extends inside of the hollow body A and supports the inner end of the burner L, into which it opens.

The burner L is formed at its inner end into a cone, L', which forms the seat for the pointed end of a valve-rod, N, screwing into the said burner L and extending to the outside, 0, for turning said valve-rod N in the burner L. The cone L' of the burner L opens into a pipe, P, extending forward and downward and into an inverted distributing-pan, Q, resting on the top of the bottom plate, A', of the body A. A number of apertures, Q', are formed in the lower edge of said distributing-pan Q, as so as to permit the burning gases to pass out of the distributing-pan Q on the bottom plate, A'.

Under the burner L is held a pan, R, into which the gasoline from the burner L can pass when the valve is open and before the burner is ignited.

The operation is as follows: The valve-rod N closes the cone outlet-opening L' of the burner L, and then the operator fills the reservoirs C and D with gasoline or like substance, after which the reservoir C is closed by screwing on the cap II. The gasoline from the reservoir D passes through the pipe I to the chamber J, and from the latter through the pipe K to the burner L. When the operator desires to heat the sad-iron, he removes the top plate, B, and turns the valve-rod N sufficiently to permit a few drops of gasoline to pass out through the cone-shaped opening L' into the pan R. The operator then again closes the valve-rod N and ignites the gasoline in the pan R. The heat from the gasoline in the pan R heats the burner L and part of the pipe K, whereby the gasoline contained in the said burner L and the pipe K are converted into gases, and when the operator now opens the valve-rod N by turning the button O the gases escape through the cone-shaped opening L'. The operator now ignites the escaping gases at the cone-shaped opening L' of the burner L, and then closes the top plate.
The ignited gases pass into the pipe P and into the distributing-pan Q, from which they pass out at the bottom openings, Q', and on the bottom plate, A², outside of the distributing-pan Q. It will be seen that the ignited gases first heat the middle part of the bottom plate, A², surrounded by the lower edge of the distributing-pan Q, and the burning gases from the distributing-pan Q heat the rest of the said bottom plate, A². At the same time sufficient heat is generated by the burning gases emitted from the cone-shaped opening L' to convert all the gasoline coming down the pipe K into gases before issuing from the cone-shaped opening L', so that all the gasoline from the reservoirs C and D is finally burned at the burner Q, except that portion burned in the pan R.

When the reservoirs C and D are once filled with gasoline and the gases issuing from the burner L are ignited, as before described, the sad-iron will be continually heated for about six hours before the reservoirs need to be refilled with gasoline.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent.

In a self-heating sad-iron, the combination of a hollow body, reservoirs supported upon the body at each end thereof, pipes connecting the reservoirs together, a chamber at one end of the body, a pipe leading from one reservoir to said chamber, a burner in the body, a pipe leading from the said chamber to the burner, an apertured distributing-pan on the bottom of the body, and a pipe into which the burner opens leading to the distributing-pan, substantially as herein shown and described.

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Witnesses:
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