

W. C. FISCHER.

SADIRON.

APPLICATION FILED AUG. 27, 1918.

1,316,291.

Patented Sept. 16, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

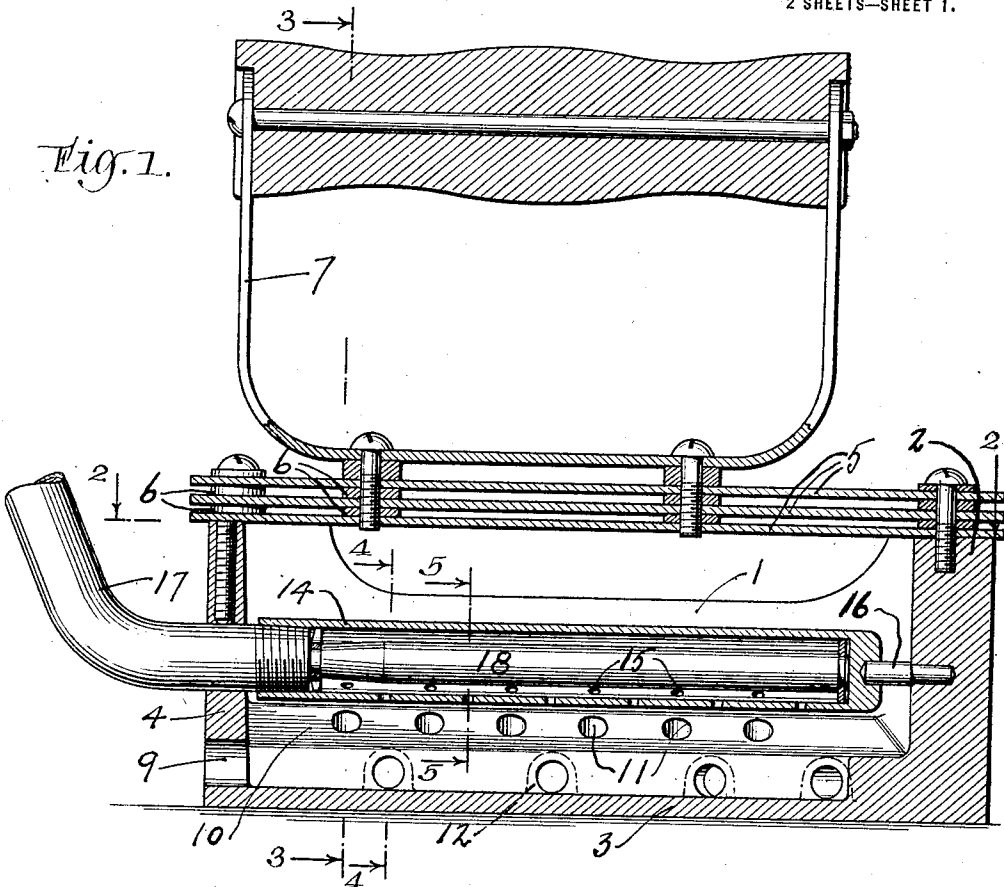
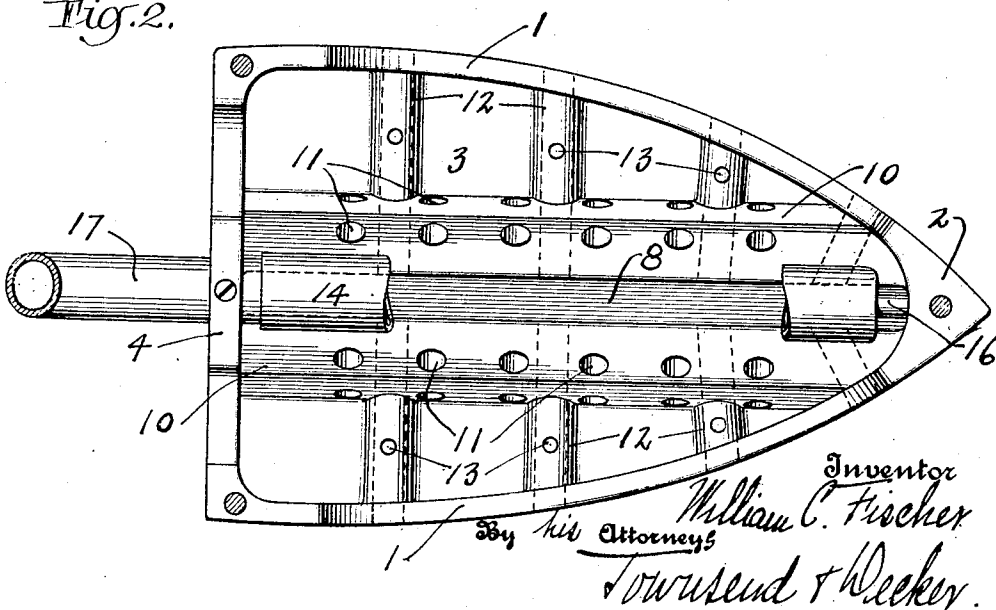


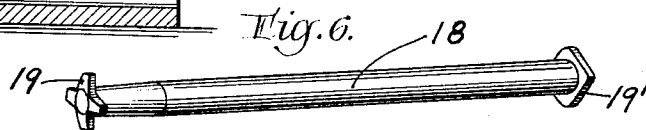
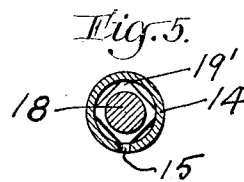
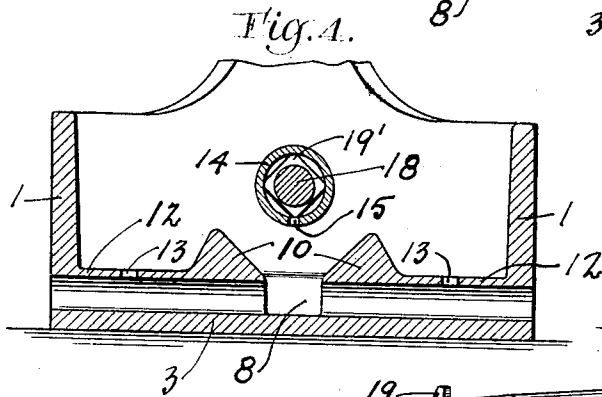
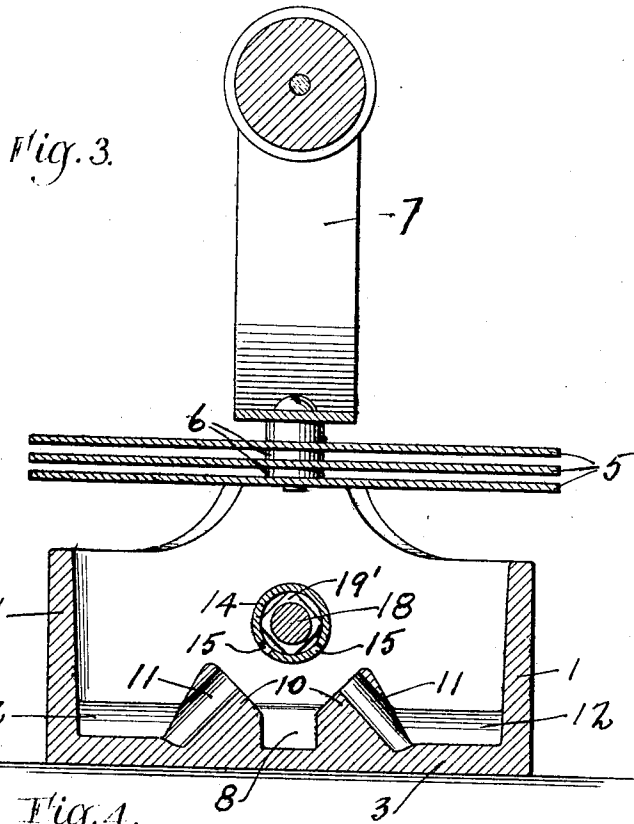
Fig. 2.



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1,316,291.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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SADIRON.

1,316,291.

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Application filed August 27, 1918. Serial No. 251,673.

To all whom it may concern:

Be it known that I, WILLIAM C. FISCHER, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Sad-irons, of which the following is a specification.

My invention relates to sad-irons and more particularly to sad-irons of the gas-heated type and has for its object the production of a gas-heated sad-iron of simplicity of construction which shall be adapted to become thoroughly and effectively heated in a minimum length of time with a minimum amount of gas.

Other and further objects of my invention will appear from the accompanying description, the invention consisting in the novel parts and combinations of parts hereinafter more particularly described and then specified in the appended claims.

In the accompanying drawings:

Figure 1 is a horizontal section taken through my improved sad-iron.

Fig. 2 is a horizontal section taken on the line 2—2 of Fig. 1.

Fig. 3 is a vertical cross-section taken on the line 3—3 of Fig. 1.

Fig. 4 is a vertical cross-section taken on the line 4—4 of Fig. 1.

Fig. 5 is a vertical cross-section taken on the line 5—5 of Fig. 1.

Fig. 6 is a perspective view of the intensifier.

Fig. 7 is a perspective view of the burner.

Referring more particularly to the several figures of the drawing:

1 indicates the side walls of the hollow metallic body of my improved sad-iron which preferably converge toward each other and meet in a common head 2 as in the conventional type of iron. 3 indicates the base of the iron and 4 the rear wall thereof. The cover of the iron is indicated at 5 and is preferably laminated, the laminae being held in spaced relation to each other by suitable screws or bolts passing through washers 6 which are interposed between the laminae. Some of said screws also act as fastening means for securing the laminae comprising

the cover 5 to the body of the iron and others act as fastening means for also securing a suitable handle 7 to the cover as illustrated. By making the cover laminated and leaving air spaces between the laminae a large amount of conduction and radiation of heat through the cover is prevented so that the handle at all times remains practically cool.

Running longitudinally through the iron from the rear wall to the head and in the base 3 thereof is a slot or channel 8 and 9 indicates a hole in the rear wall communicating with said slot or channel, as shown in Fig. 1, to permit air to enter therein from the back of the iron. On either side of the slot or channel 8 and running longitudinally the length of the iron and preferably cast as integral parts of the base, are the walls 10 with the faces thereof adjacent the slot or channel upwardly inclined therefrom. The said walls 10 are each provided with a series of holes 11 extending laterally through the inclined faces and communicating with the base portion of the iron adjacent the side walls thereof. To permit a sufficient amount of air to enter the bottom of the slot or channel 8, I have provided a number of transverse air pipes or ducts 12 which may, if so desired, be cast as integral parts of the iron, and which connect with openings drilled through the sides of the slot or channel 8 and through the side walls 1 of the iron as illustrated. I have found in practice that the iron functions to best advantage if an additional supply of air is supplied to that portion of the iron adjacent its base and between the side walls 1 and walls 10 and I have therefore supplied the air pipes or ducts 12 with small air holes 13 drilled through the tops thereof.

The burner proper is indicated at 14 and consists of a removable hollow cylindrical member or pipe the front end of which is closed and the rear end of which is open and interiorly threaded. Said burner is provided with a plurality of rows of gas holes 15, preferably three in number, the holes of the two outer rows being so spaced as to be adapted to register with the holes 11 in the walls 10. The said burner is held in operative position, or that position shown

in Fig. 1, by means of a pin 16 in the head 2 of the iron entering a depression in the closed end of the burner and also by means of the screw-threaded end of a gas pipe 17 entering through the rear wall 4 of the iron and entering and engaging the interiorly screw-threaded rear end of the burner.

To increase the heating surface within the burner and thereby increase the intensity or amount of heat supplied to the iron without increasing the supply of gas, I have provided, what I term an "intensifier" which is indicated at 18. Said intensifier comprises a rod either hollow or solid adapted to fit within the burner 14 and is provided at either end with positioning pieces 19 and 19' so that the intensifier will remain in the center of the burner and will not close the holes 15 therein. As is illustrated, the positioning piece 19 is provided with cut out portions so as to permit gas to readily flow from the gas pipe 17 within the burner 14.

When the parts of the iron are assembled as shown in Fig. 1, the gas pipe 17 is connected, preferably by a flexible tubing, with a source of gas supply and the gas is permitted to flow within the burner where it mixes with air and expands and is ignited. By means of the intensifier 18 a relatively large heating surface is provided within the burner considering the inner area of the burner and consequently a great amount of heat is supplied to the iron as has been explained. The gas flame from the burner leaves the same through the holes 15 therein, the flame being impinged from the middle row of holes directly downwardly against the bottom of the slot or channel 8 and laterally from the two outer rows of holes within the holes 11 of the walls 10 and thence against that portion of the bottom or base of the iron intermediate the side walls 1 and the walls 10. Thus the holes 11 serve as guideways or directing means for the flames which are impinged from the two outer rows of holes and prevent them from being deflected from their proper course even though there are air currents present in the bottom of the iron. As is obvious, even though the burner is of small area, and consumes a small amount of gas, the construction thereof and of the adjacent parts of the iron permits the entire surface of the base to be effectively subjected to a heating flame which heating flame is intensified by the intensifier 14 previously described. It should be noted that the side walls 2 and a portion of the rear wall 4 (Fig. 2) is preferably so constructed as to leave a space between the cover 5 and the body of the iron to permit air to enter within the iron from the top thereof and to assist in the cooling of the cover.

What I claim as my invention is:

1. A sad-iron comprising a metal body, a

handle therefor, and a cover intermediate the body and handle to which said body and handle are connected, said cover consisting of a plurality of separated plates of substantially equal size joined together and having free air spaces therebetween.

2. A sad-iron comprising a hollow metal body, a handle therefor, a burner suspended within said body and adapted to impinge a heating flame against the inner surface of the base thereof and an intensifier within said burner for increasing the heating surface thereof.

3. A sad-iron comprising a hollow metal body, a handle secured thereto, a burner consisting of a hollow pipe suspended within said body and adapted to impinge heating flames against said metal body and an intensifier consisting of a rod fitting within said burner.

4. A sad-iron comprising a hollow metal body, a handle secured thereto, a burner connected with a source of gas supply and consisting of a hollow pipe suspended within said body and adapted to impinge heating flames against the inner surface of the base of said body and an intensifier consisting of a rod fitting within said burner and provided at either end thereof with positioning pieces to cause said intensifier to retain its proper position within said burner.

5. A sad-iron comprising a hollow metal body, a handle secured thereto, a slot or channel in the base of said body, air ducts connecting with said slot or channel, walls running longitudinally of said body and adjacent said slot or channel and provided with flame directing holes therein and a burner suspended within said body and adapted to impinge heating flames both directly against the bottom of said slot or channel and through the flame directing holes against the inner surface of the base of the body.

6. A sad-iron comprising a hollow metal body, a laminated cover secured to said body, a handle secured to said laminated cover, a slot or channel in the base of said body, air ducts connecting with said slot or channel, walls running longitudinally of said body on either side of said slot or channel and adjacent the same and provided with flame directing holes extending downwardly there-through, a burner consisting of a pipe provided with holes and suspended within said body and adapted to impinge heating flames through the holes thereof both directly against the slot or channel and through the flame directing holes of said walls against the inner surface of the base of the body and an intensifier consisting of a rod fitting within said burner.

7. A sad-iron comprising a hollow metal body, a handle secured thereto, walls in the base of said body running longitudinally of

said body and provided with flame directing
holes therein and a burner suspended within
said body and adapted to impinge heating
flames through the flame directing holes and
5 against the inner surface of the base of the
body.

Signed at New York, in the county of New

York and State of New York, this 26th day
of August A. D. 1918.

WILLIAM C. FISCHER.

Witnesses:

LILLIE VREELAND,
FRANK ROESLER.

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