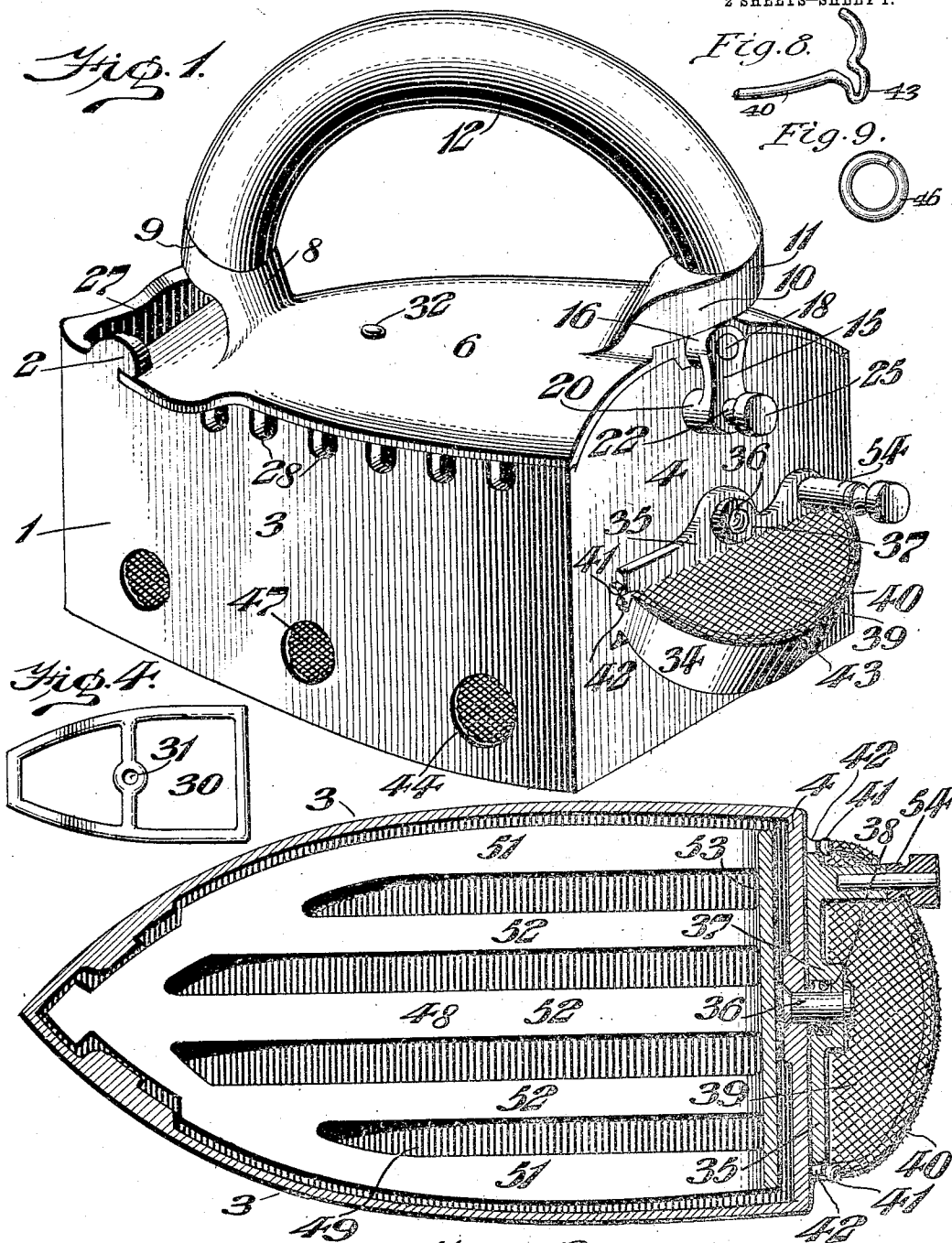


1,052,117.

Patented Feb. 4, 1913.

2 SHEETS-SHEET 1.



WITNESSES

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Fig. 3.

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SAD IRON.
APPLICATION FILED MAR. 21, 1912.

1,052,117.

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2 SHEETS—SHEET 2.

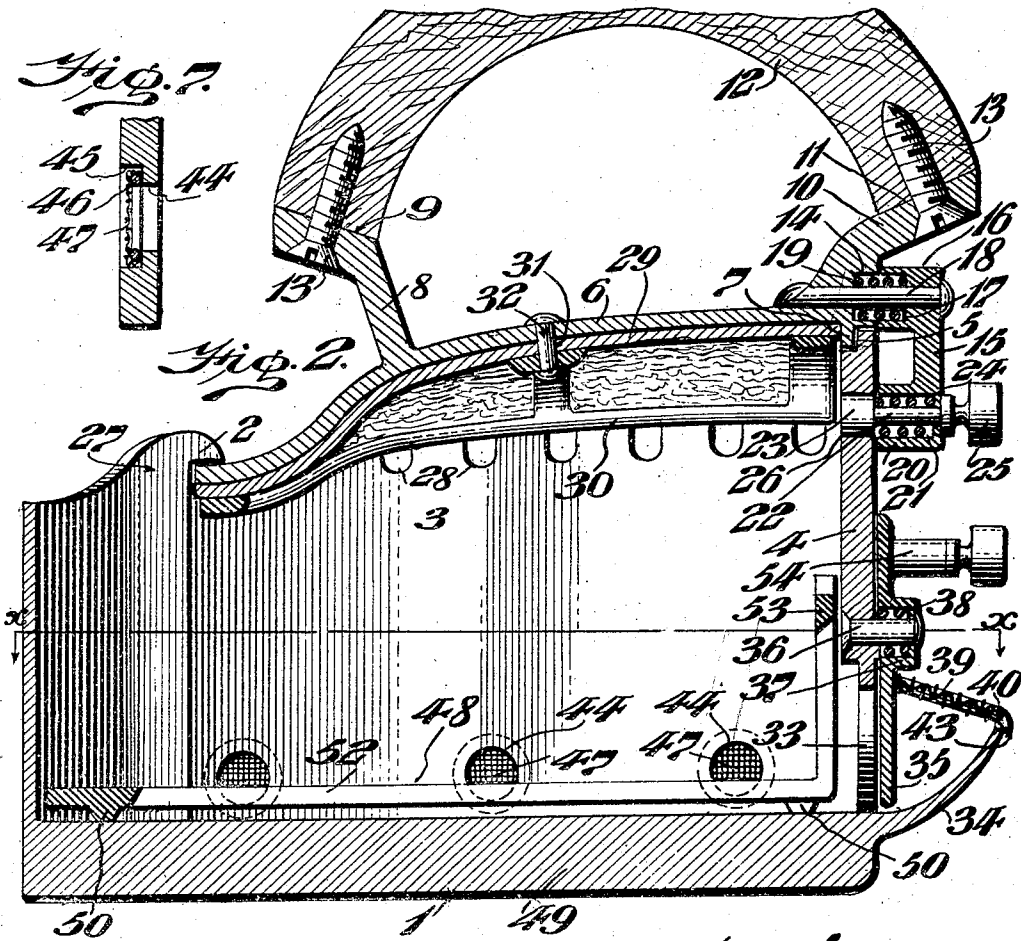
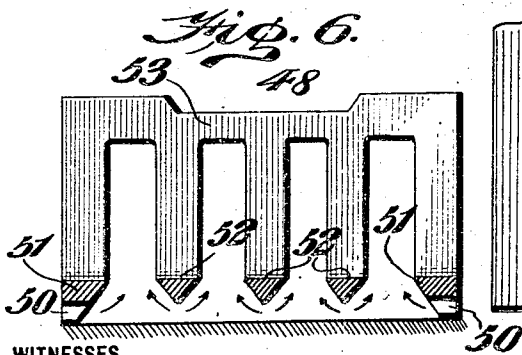
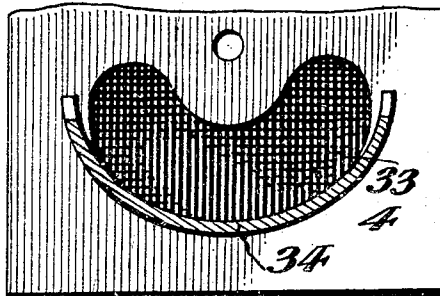


Fig. 5.



WITNESSES

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SAD-IRON.

1,052,117.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed March 21, 1912. Serial No. 685,141.

To all whom it may concern:

Be it known that I, HARRY ABRAMSON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Sad-Iron, of which the following is a specification.

My invention consists of an improved sad iron of the style in which the hollow body of the iron is heated by the combustion of charcoal or similar fuel within such body.

It further consists of improved means for securing the top-plate to the body of such iron.

It further consists of an improved ash-guard at the heel or rear end of the body.

It further consists of improved means for controlling the rear draft in the iron.

It further consists of an improved screen for the ash-guard and draft opening.

It further consists of improved means for securing the heat-insulating material in the top of the iron.

It further consists of an improved grate or fuel support.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a perspective view of my improved sad iron. Fig. 2 represents a longitudinal section of the said iron. Fig. 3 represents a horizontal section on the line $x-x$ in Fig. 2. Fig. 4 represents a plan view on a small scale of the frame or retainer for the asbestos-pad. Fig. 5 represents a view of a portion of the rear wall of the body, with the ash-guard in section. Fig. 6 represents a transverse section of the grate or fuel support. Fig. 7 represents a sectional detail view of one of the lateral draft-openings and its screen. Fig. 8 represents a perspective view of a portion of the screen-frame. Fig. 9 represents a detail view of the split ring for the screens of the draft-openings.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, the reference

numeral 1 indicates the hollow body of the iron which is of the usual square-heeled type. Two rearwardly pointing hooks, 2, are formed upon the upper edges of the side-walls, 3, of the body near the point of the same, and the upper edge of the rear wall, 4, of the body is formed with a rabbet, 5. A top-plate, 6, preferably domed or bulged, has its front edge engaging under said hooks, and has a rib, 7, near its rear edge, fitting in the rabbet of the rear wall. Said top-plate is curved to correspond with the curved contours of the upper edges of the side-walls. A bracket, 8, having an oblique seat, 9, projects from the top-plate, near its forward end, and a bracket, 10, having an oblique seat, 11, projects upward and rearward from the rear edge of the top-plate, and the ends of an arched wooden handle, 12, are secured to the oblique seats by screws, 13, passing through the seats and into the ends of the handle. A small bore, 14, or cylindrical recess, is formed at the rear edge of the top, and an arm, 15, has a boss, 16, at one end, formed with a similar bore, 17, and said arm is pivoted upon a pin, 18, passed axially through both bores and secured in the top. A coiled spring, 19, surrounds said pin within the bores, and serves by its tension to retain the arm in whatever position it may be swung. The free end of this arm has a boss, 20, formed with a bore, 21, and a bolt, 22, slides with its head, 23, in said bore, having a coiled spring, 24, bearing against its head and formed with a knob or handle, 25, for pulling it. The enlarged head is adapted to register with and enter an opening, 26, in the rear wall of the body of the iron. The top is thus detachably secured to the body of the iron by its front end engaging the hooks near the forward ends of the side-walls and by the sliding spring-latch engaging the opening in the rear wall of the body. As the top does not completely cover the upper side of the body, an opening, 27, is formed at the point of the iron, through which the gases and fumes from the glowing fuel within the body may escape. A series of notches, 28, is formed in the upper edge of each side-wall of the body, forming additional outlets for such gases and fumes. A pad, 29, of asbestos or similar non-combustible and heat non-conductive material, and corresponding in outline and shape to those of the top, is fastened to the

same by an open metal-frame, 30, having a cross-bar formed with an opening, 31, through which is inserted a bolt, 32, secured in the top. Said open frame corresponds in outline and shape to those of the top, its ends being blunt forming cross bars thereat, the same abutting against the front and rear portions of the inner walls of the body, so as to prevent turning of said frame, and permit the employment of a single bolt 32, to hold said frame and consequently said pad 29 in place.

The top plate 6 is bulged or concave from below upwardly so as to raise the central portion thereof above the fuel that is used within the body and thus prevent said fuel from scratching the asbestos pad or lining 29 on said bulging or concaved underside of the plate 6.

The rear wall of the body of the iron is formed with a curved draft-opening, 33, and with a cup-shaped ash-guard, 34, integral with the wall. A rotary gate, 35, is pivoted upon a bolt, 36, secured to the rear wall and over the center of the curved draft-opening and said gate is formed with a hub, 37, at the center of its circular edge, through which the bolt passes and in which is provided a coiled spring, 38 which serves by its tension to retain the gate in whatever position it may be rotated by its handle 54. A screen, 39, of woven wire or other foraminous material, has a curved frame at its outer rounded edge, formed by a curved wire, 40, having outwardly bent ends, 41, resting and rotatable in notches, 42, in the upper edge of the ash-guard, and also having a downwardly-curved lip or bulge, 43, which engages the upper edge of the ash-guard.

Circular openings, 44, are formed in the side-walls, near their lower edges, and are formed with rabbets, 45, and foraminated screens are formed by resilient frames, 46, preferably of split wire rings, and coverings, 47, of wire-cloth, sprung into the rabbets of said openings.

A grate, 48, of the same shape as the inside of the bottom, 49, of the body of the iron, rests on feet, 50, which slightly elevate the grate above the bottom, and consists of side-bars, 51, having beveled inner sides, and longitudinal bars, 52, which are triangular in cross section. The rear portion of the grate is bent upward at a right angle to the horizontal portion, and the ends of the bars are connected by a cross bar 53.

In practice, the fuel, such as charcoal, with a sufficiency of kindling is placed in the body and upon the grate therein and ignited, the gate for the draft-opening being swung aside to open the same. Gases and other products of combustion escape through the opening at the point of the iron and through the openings in the upper edges of the side-walls. It follows that the top is removed

when the fuel is placed in the body and again replaced as soon as the fuel is ignited. When the iron is sufficiently heated, the gate is turned to close the draft-opening, and the openings near the lower edges of the side-walls will supply sufficient oxygen to keep the glowing coal within the body alive without undue generation of gases or other products of combustion. If necessary, the coals may be stirred within the body by means of a metal rod or other implement inserted through the opening at the point of the iron. Any ashes which may drop out of the draft-opening, will drop into the ash-guard, so as not to soil whatever article is ironed or pressed. Whenever it becomes necessary to revive the glowing coals in the iron, the gate may be turned to more or less open the draft-opening, the spring around the pivot-bolt of the gate retaining by its friction the gate in its adjusted position. The screen upon the ash-guard will prevent sparks or small pieces of glowing coal from dropping out upon the article being pressed. As the grate is bent at a right angle, the latter may be brought down into the heel of the body, bringing the fuel close to the entire inner side of the bottom of the body, so that the latter is equally heated at all points. Owing to the fact that the inner sides of the outer members of the grate bars are beveled or flaring downwardly and the intermediate bars have their undersides converging and so present V-edges or points to the bottom of the body, there will be widened spaces between the several bars at the bottom of the grate so as to allow larger volumes of air to enter and pass through said spaces and correspondingly supply the fuel so as to increase the combustion of the latter while the fuel is brought close to the bottom of the iron, and the inclined sides of the bars will not readily afford lodgment for ashes and coals beneath the bars to obstruct circulation beneath the grate.

The non-conducting pad will prevent undue radiation of heat from the top of the iron to the hand of the operator, and such pad is firmly and smoothly secured to the under side of the top of the iron by means of the open frame and its fastening bolt.

The top and handle are firmly secured to the body of the iron by the forward edge of the top engaging beneath the hooks upon the side-walls of the body and by the swinging arm having the spring-bolt engaging the opening in the end wall. Said bolt cannot be disengaged from the opening excepting by pulling it outward by its knob, so that all accidental detachment of the top from the body is prevented. By having the oblique seats and brackets at the forward and rear ends of the top of the iron, the screws which secure the ends of the handle to such seats and brackets may be easily in-

sented and screwed home, and ready access may be had to said screws for removal and replacement of the handle.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. In a sad-iron, a body having an open upper side and formed with rearwardly-pointing hooks upon the upper edges of its side-walls near their forward ends and also formed with an opening in its rear wall, a top-plate adapted to rest on the upper edges of the side-walls of the body and to have its front edge engage the hooks upon the same, an arm pivoted at the rear edge of said top-plate, a spring having frictional engagement with said top-plate and arm, and a spring actuated bolt in the free end of said arm and adapted to enter the opening in the rear wall of the body of the iron.

2. In a sad iron, a hollow body having an opening in its rear wall, a top-plate formed with a cylindrical recess at its rear edge, an arm having bosses at its end formed with cylindrical recesses, a bolt passed through the recess in the top-plate and the recess in one end of the arm, a coiled spring around said bolt and in said recesses, a headed bolt slidable in the recess

in the free end of the arm and having a knob at its outer end, and a spring in the recess in the outer end of the arm and coiled around the bolt to bear against its head.

3. In a sad iron, a hollow body having a draft opening in its rear wall and a cup-shaped ash-guard rigid with the same beneath and partly around such opening, a gate pivoted upon said rear wall to swing to cover or uncover said opening, and a foraminous screen hinged to swing over and cover the open top of said ash-guard.

4. In a sad iron, a hollow body having a draft-opening in its rear wall, a gate movably supported to cover or uncover said opening, a cup-shaped ash-guard rigid with the rear wall of the body and extending beneath and partly around the draft-opening and formed with notches at its juncture with the rear wall, and a foraminous screen having a curved wire in its edge having its ends bent outward to rest and turn in the notches and formed with a downwardly bulged lip at its middle.

HARRY ABRAMSON.

Witnesses:

C. D. McVAY,
F. A. NEWTON.

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