J. KADIERA.

SAD IRON.

APPLICATION FILED JUNE 17, 1908.

943,254.

Patented Dec. 14, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

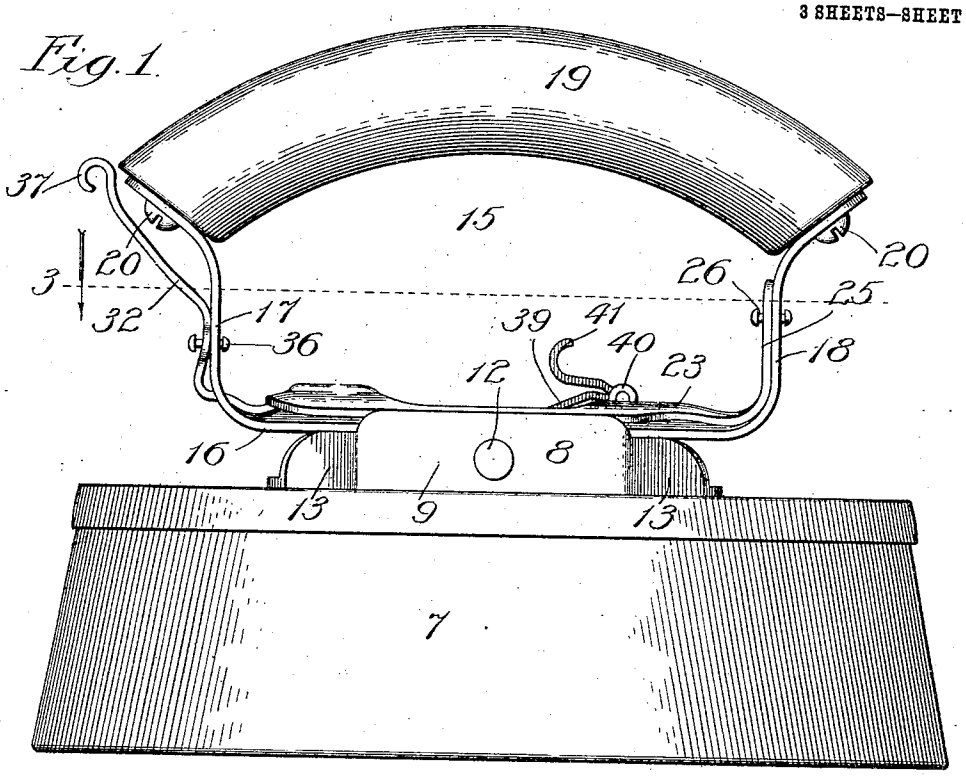
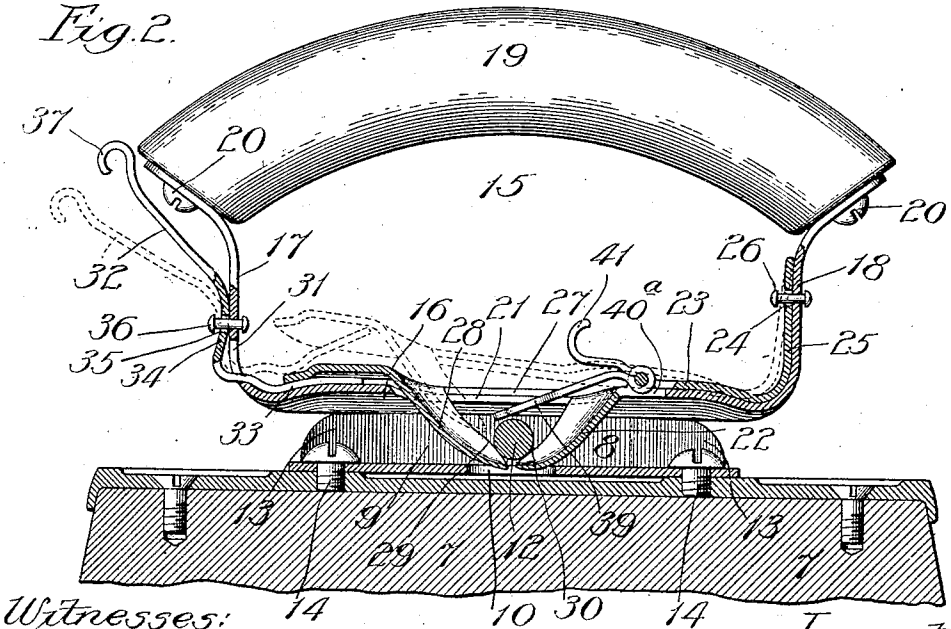


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

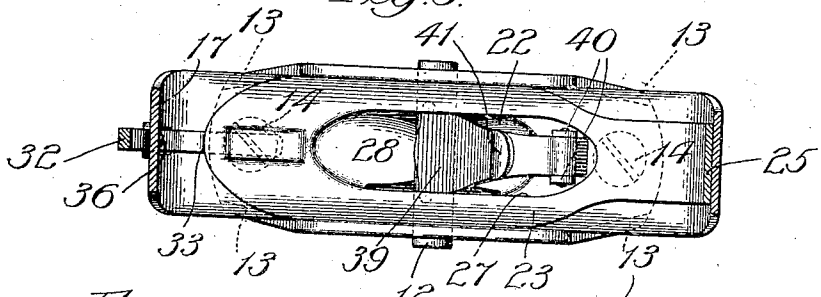


Fig. 4.

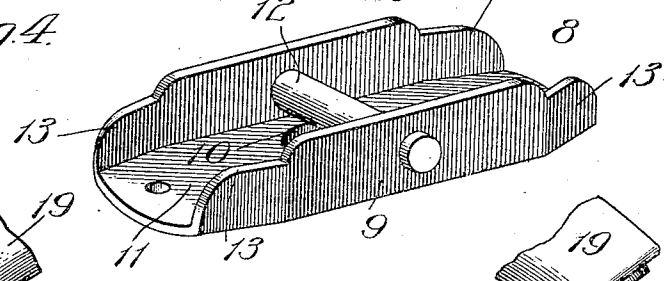


Fig. 5.

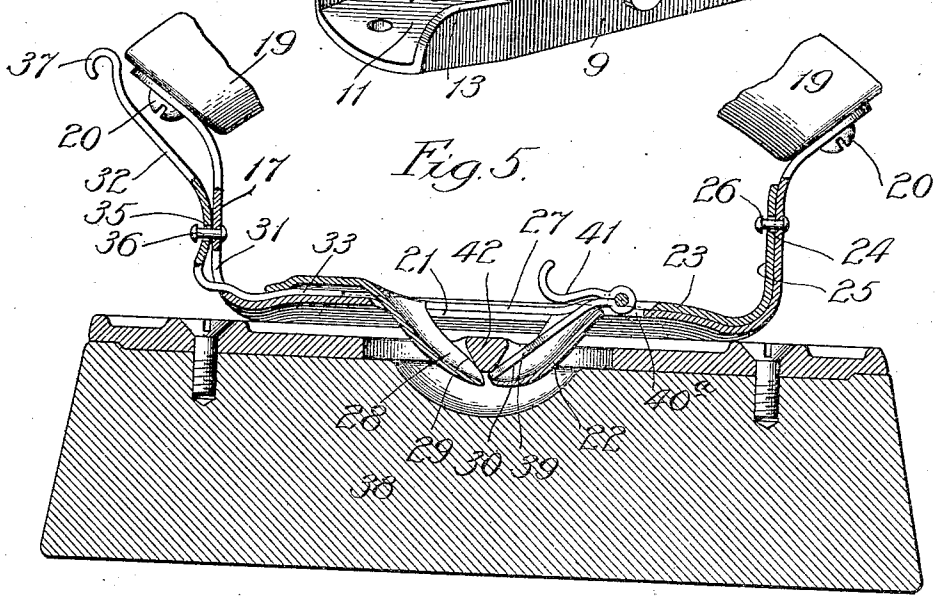
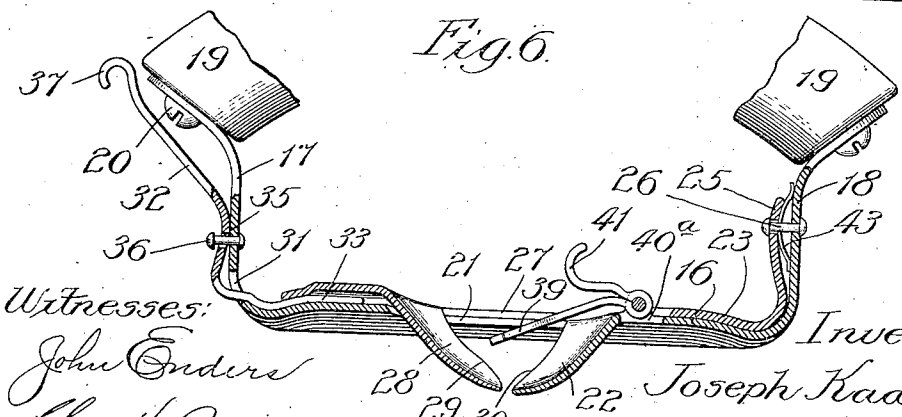


Fig. 6.



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3 SHEETS—SHEET 3.

Fig. 7.

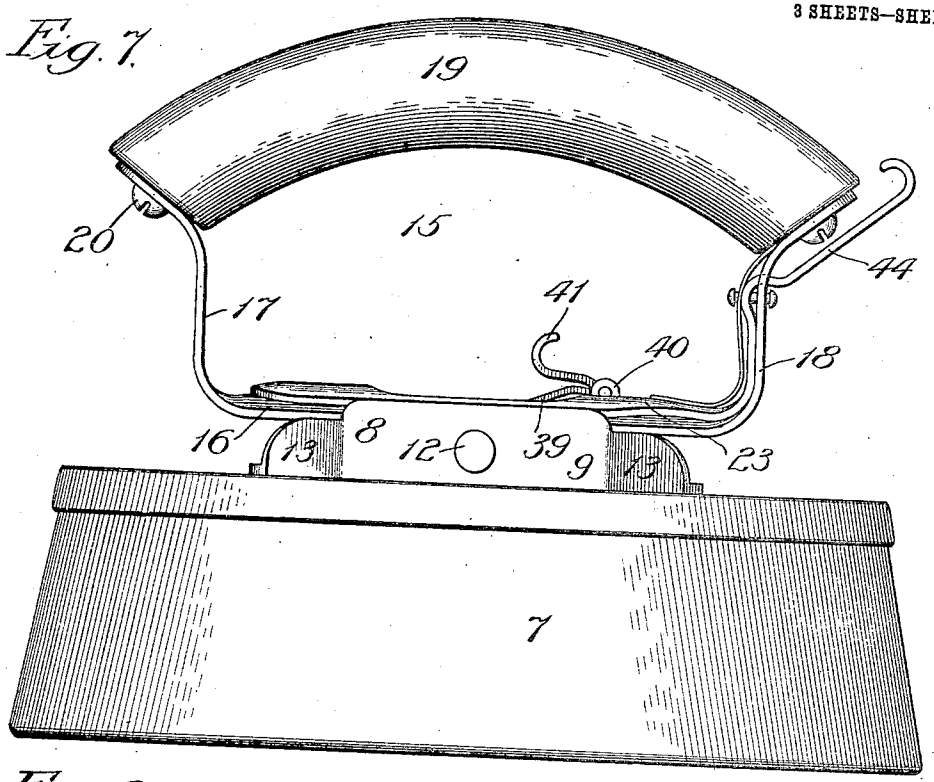
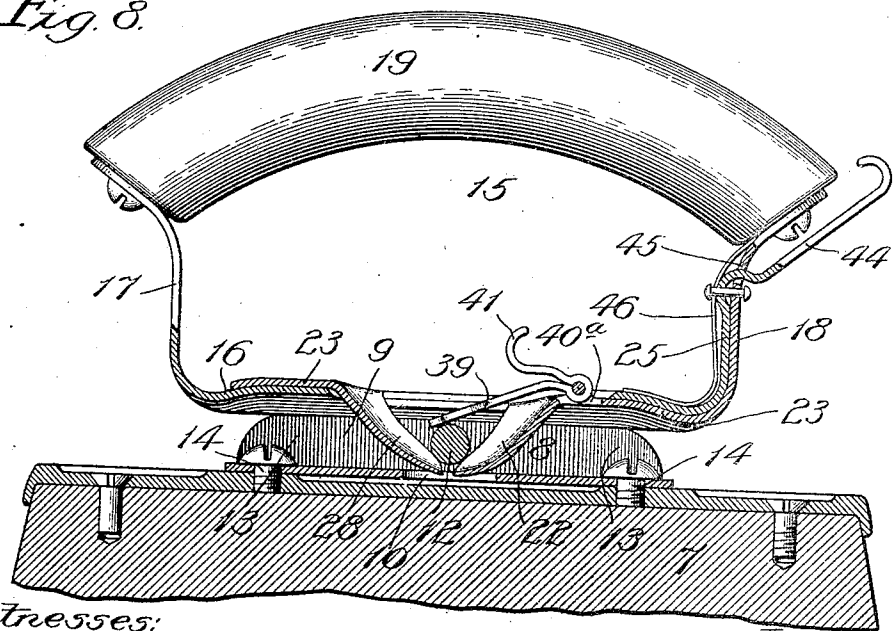


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSEPH KADIERA, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO T. J. HRUBY, OF CHICAGO, ILLINOIS.

SAD-IRON.

943,254. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed June 17, 1908. Serial No. 438,955.

To all whom it may concern:

Be it known that I, JOSEPH KADIERA, a subject of the Emperor of Austria-Hungary, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sad-Irons, of which the following is a specification.

My invention relates to the type of sad-irons employing a handle having a stationary depending lug and a movable lug co-operating therewith for engaging a rib, or the like, provided on the upper surface of the iron.

One of my objects is to provide a simple construction of removable and replaceable sad-iron handle which may be used in connection with the standard makes of sad-irons, and by the use of which burning of the hand of the operator in removing the handle from the iron will be avoided.

Another object is to provide a handle which may be easily and readily applied to and removed from an iron and which, when applied, will positively engage the latter.

Another important object is to provide a construction of plate for attachment to the upper surface of irons to which, in their original form, my improved handle is not applicable, for providing on the iron the necessary device for engaging with the handle-gripping means.

Referring to the accompanying drawings—Figure 1 is a view in side elevation of a sad-iron employing my improved plate and showing my improved handle attached thereto. Fig. 2 is a view in elevation, and partly in sectional elevation, of the construction illustrated in Fig. 1. Fig. 3 is a section taken at the line 3 on Fig. 1 and viewed in the direction of the arrow. Fig. 4 is a perspective view of my improved iron-plate. Fig. 5 is a partially broken view in sectional elevation of a sad-iron of ordinary type showing my improved handle attached thereto; Fig. 6, a partially broken view in sectional elevation of a modification of the handle illustrated in the preceding figures; Fig. 7 is a view similar to that of Fig. 1 of another modification of the handle of the preceding figures; and Fig. 8, a view like Fig. 2 of the handle shown in Fig. 7.

The iron represented at 7 in Figs. 1 and 2 is of a type commonly provided for the market which does not employ a socket and rib in its upper surface as is common with most of the commercial irons. To cause such type of irons to present the handle-gripping rib or bar as provided in the general class of irons to which my improved handle is applicable, I provide a flanged plate 8 preferably formed of sheet metal by striking up its lateral edges to form upwardly extending flanges 9 which support a slight distance above an opening 10 in the bottom 11 of the plate so formed, a cross-bar, rib, or rod 12, the end-portions of the flanges 9 being deflected inwardly as represented at 13 for a purpose hereinafter disclosed. This plate may be attached to the iron 7 in any suitable manner, as by the screws 14.

The handle 15, which is designed to be used with irons provided with ribs on their upper surfaces and sockets below the ribs, or with irons having a plate to afford a cross-bar, as for instance the bar 12, has a main plate 16, the ends 17 and 18 of which are bent to extend upwardly and be joined to the opposite ends of the wooden grip 19, as by the screws 20. The plate 16 contains an elongated opening 21 through it intermediate its ends, and extending in a downwardly inclined position from this plate at one end of its slot 21, is a lug 22, it being preferred that this lug be formed by striking down from the plate carrying it a portion of the metal displaced in forming the slot 21. Superposed on the upper surface of this plate is a second plate 23 which is loosely connected at an opening 24 in an upwardly bent end portion 25 thereof, to a stud 26, in the form of a rivet fastened in the plate-end 18. The plate 23 contains a longitudinally extending elongated slot 27 registering with the slot 21 in the plate 16, but of somewhat greater length. The plate 23 also carries a downwardly inclined lug 28 which inclines relative to the plate carrying it at an angle approximating that at which the lug 22 extends relative to the plate 16, the lug 28 being carried at an end of the slot 27 opposite to the end at which the lug 22 is carried, and these lugs tapering in opposite directions and affording converging inclined surfaces 29 and 30, respectively. The end-portion 17 of the plate 16 contains an elongated slot 31 through which a trip-arm 32, at a horizontal portion 33 thereof, extends, the upwardly-extending portion 34 of this arm being loosely connected at an opening 35 therein to a rivet 36 fastened in

the portion 17, to enable the inner end of the portion 33 of the arm to be raised when the latter is swung upon its pivot 36 by operating it at its handle-portion 37, which, as shown, extends within convenient reach of the hand of the operator, while grasping the handle, the raised position of the arm 33 being illustrated by dotted lines in Fig. 2.

The operation of the handle as described is as follows: The handle is applied to an iron to cause its lugs 22 and 28 to rest at their lower extremities upon the bar 12, the weight of the handle causing the lug 28 to move upwardly and swing the plate 23 upon its pivot 26. As soon as this lug clears the rib 12, the lug 22 is free to project under this rib, and when this last referred to lug assumes this position, the lug 28, being free to swing under the rib 12 from the opposite side thereof, so positions itself by gravity, the plate 23 dropping to a position in which it is superposed on the plate 16. With the lugs thus engaging the rib 12, the plate 16 rests at its under side upon the upper edges of the portions 13 of the flanges 9, and the handle is thus firmly held on the iron.

The removal of the handle from the iron may be effected by rocking the arm 32 to the position indicated by dotted lines in Fig. 2, this operation resulting in the raising of the plate 23 and with it the lug 28 to the position represented in dotted lines in Fig. 2, in which position the lugs 22 and 28 are separated a sufficient distance apart to permit the handle to be readily lifted from the iron.

It is desirable in constructions of this character that the handle be so formed that when applied to the iron it will be rigid thereon and not fit loosely. As the standard makes of iron to which I make my handle applicable differ somewhat as to the disposition of their handle-engaging rigs, a handle constructed as described will not tightly fit all of the makes of irons of this class, as for instance the iron illustrated at 38 in Fig. 5. To enable my handle to closely fit all irons of this class, I provide a removable and replaceable plate 39 which is designed to be applied flatwise to the upper surface of the lug 22. As one of the ways in which this plate may be provided, I pivot the plate 39 to ears 40 struck up from the plate 16 at the sides of an opening 40^a therein, so as to cause the plate 39 to extend through the slot 21 in the plate 16. The plate 39 has a lip 41 affording a finger-grip by which it may be moved at its pivotal connection with the ears 40 into and out of superposed position on the lug.

When it is desired to apply the handle to an iron having a rib, as for instance the rib 42, so positioned relative to the top surface of the iron-proper that the handle will fit loosely thereon if it is applied as shown in Fig. 2, the plate 39 is turned down to the position illustrated in Fig. 5, to cause it to lie against the lug 22 and afford a filler which, when in place, causes the handle to closely fit the iron. It will, of course, be understood that this filler is moved into and out of operative position, depending upon the particular kind of an iron to which the handle is applied.

The construction of the handle illustrated in Figs. 7 and 8 is the same as that shown in the preceding figures with the exception that instead of employing the lever 32 for operating the plate 23, a lever 44 is provided as an extension on the plate 23, this lever extending through an opening 45 in the upright 18 and terminating at its upper end at a point making it convenient of operation by the operator. It will be understood that the movable lug of the construction illustrated in Figs. 7 and 8, is raised to disengage it from the iron by rocking the plate 23 at its pivotal connection with the upright 18 through the medium of the lever 44.

It will be noted that by forming the lugs so as to cause them to project under the handle-gripping rib on the iron pressing upon or lifting the handle while the iron is in use will not disengage the handle from the rib, and thus the handle is held to the iron without requiring the use of a stiff spring. It will furthermore be noted that the trip-arm 32 in the one case and the lever 44 in the other case are so positioned that, in the use of the iron, heat from the latter will not be communicated to it, and thus burning of the hand of the operator, when removing a handle, is avoided.

To avoid any danger of accidental disengagement of the handle from the iron, should the latter be turned to inverted position, I may employ a light spring, as for instance the spring 43 in the construction shown in Fig. 6, this spring being mounted between the end 18 of the plate 16 and the portion 25 of the plate 23, at the stud 26; or the spring 46 in the construction shown in Fig. 8, the spring 46 being of angular shape and lying at its free end against the upper surface of the plate 23. It is desired that these springs be of such a stiffness as to only overcome the gravity of the plate 23, should the iron be inverted, it being understood that the tendency of these springs is to yieldingly maintain the plate 23 against the plate 16. It will thus be readily understood that by providing the removable and replaceable filler-plate 39 my improved handle may be caused to fit any iron of the particular type to which it is applicable. The omission of a stiff spring for holding the movable lug in such a position as to cause it in coöperating with the stationary lug to hold the handle to the iron, permits the movable lug to be moved to disengage the handle from the iron, with great ease, as compared with those irons in which a stiff spring must be employed.

What I claim as new, and desire to secure by Letters Patent, is—

1. A sad-iron handle formed of a plate of sheet-metal having up-turned ends to which the handle-grip is attached and having a lug of curved shape in cross-section depending therefrom and formed by stamping it from the metal of said plate, thereby affording an opening therein, and a second plate of sheet-metal connected with said handle and adapted to be moved into and out of superposed position on said first-named plate, said second plate having a depending lug of curved shape in cross-section formed thereon by stamping it from the metal of said plate, and said last-named lug extending through the opening in said first-named plate when the parts are in normal position.

2. A sad-iron handle formed of a plate of sheet-metal having upturned ends to which the handle-grip is attached and having a lug of curved shape in cross-section depending therefrom formed by stamping it from the metal of said plate, thereby affording an opening therein, a second plate of sheet-metal connected with said handle and adapted to be moved into and out of superposed position on said first-named plate, said second plate having a depending lug of curved shape in cross-section thereon formed by stamping it from the metal of said plate, and said last-named lug extending through the opening in said first-named plate when the parts are in normal position, and a lever supported on the handle to extend at a portion thereof adjacent to the handle-grip and operatively engaging at its opposite end with said second-named plate, for the purpose set forth.

3. A sad-iron handle formed of a plate of sheet metal having upturned ends to which the handle-grip is attached and having a lug depending therefrom and formed by partially severing the metal of said plate between its sides and bending the said partially severed portion away from the plate, thereby affording an opening therein, and a second plate of sheet-metal connected with said handle and adapted to be moved into and out of superposed position on said first-named plate, said second plate having a depending lug formed thereon by partially severing a portion of the metal of said plate and bending such partially severed portion away from the plate, said last-named lug extending through the opening in said first-named plate when the parts are in normal position.

4. A sad-iron handle having a stationary lug and a movable lug for engaging with the handle-engaging rib of a sad-iron and a filler-plate pivoted to the handle in a manner permitting it to be moved into and out of superposed position on one of the lugs, for the purpose set forth.

5. A sad-iron handle having a stationary depending lug presenting an inclined upper surface, a movable lug coöperating with said stationary lug for engaging with the handle-engaging rib of a sad-iron, and a filler-plate constructed and arranged to be moved into and out of superposed position on the inclined surface of the stationary lug, for the purpose set forth.

JOSEPH KADIERA.

In presence of—
W. B. DAVIES,
R. A. SCHAEFER.