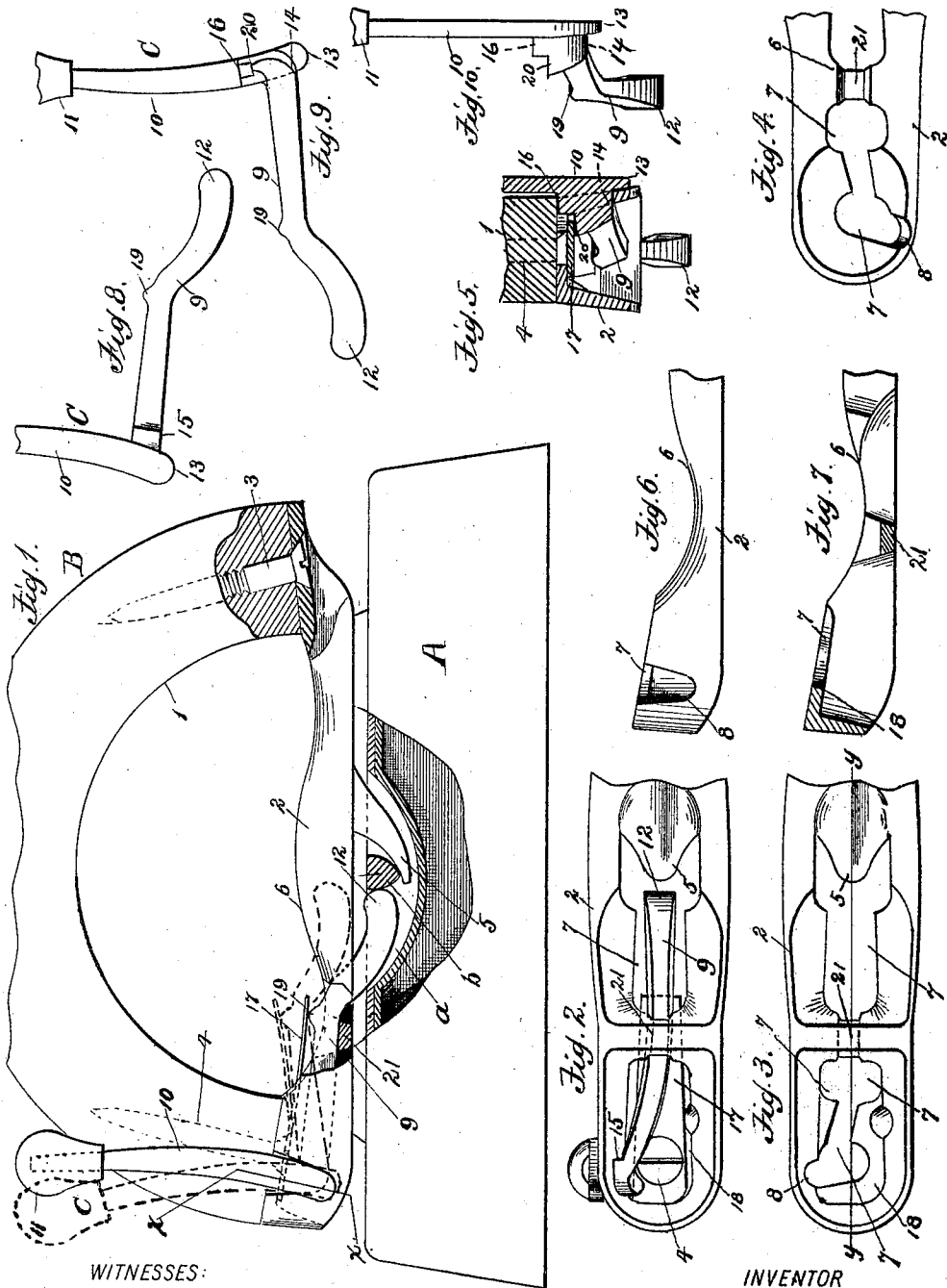


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SAD IRON HANDLE.

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WITNESSES:

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SAD-IRON HANDLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK H. KNIGHT, a citizen of the United States of America, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Sad-Iron Handles, of which the following is a specification.

My invention, while broadly relating to the general class of sad irons, yet more particularly relates to that branch of said class, wherein the body of the iron, and the handle by which the said body is operated, are separate, each from the other, and such invention contemplates the provision of a simple, cheap and durable locking mechanism, by which the handle may be firmly held in connection with the body of the iron, secure against accidental displacement therefrom while the iron is being operated, and by which it may be quickly, and easily removed from said body, without danger of the hand of the operator coming into contact with said body, during such removal, when it is to be used in connection with another body, or for any other purpose, and with the above ends in view the invention consists, in the construction, arrangement, and combination of the several parts comprised therein for service, substantially as is hereinafter described, claimed, and illustrated in the accompanying drawings, wherein:

Figure 1. illustrates in side elevation, partly in section, a sad iron having a removable handle connected thereto in accordance with my invention. Fig. 2. is a plan view of a portion of the bottom of the handle detached from the iron, to illustrate parts of my invention not shown in Fig. 1. Fig. 3. is a similar plan view of a portion of the bottom of the handle detached from the iron, and having my improved locking mechanism removed therefrom. Fig. 4. is a plan view of a portion of the handle detached from the iron, to illustrate a part of the means whereby the locking lever employed in my invention, is held in position. Fig. 5. is a sectional view taken on the line *x. x.* of Fig. 1. through a portion of the handle. Fig. 6. is a side elevation of that part of the handle that is shown in Fig. 3. Fig. 7. is a longitudinal section, taken on the line *y. y.* of Fig. 3. Figs. 8. and 9. are views illustrating the opposite sides of the locking lever, employed

in my invention, and Fig. 10. is a rear view of said locking lever.

Similar numerals and letters indicate like parts in the several figures of the drawings.

Referring to the drawings A. designates the body of the iron, which may be of any desired type of irons used in connection with detachable handles, and which is provided, within a recess *a.* which is formed in the upper surface of said body A, with a cross bar *b.* to be engaged by the locking devices carried by the detachable handle, when the iron is to be operated.

It is to be understood that the body A. may be of any desired make, or form, and either solid, or hollow, or large, or small, provided the same have a recess *a.* formed in its upper surface, and that such recess have the cross bar *b.* therein to afford means whereby the handle may be connected with the body.

To be used in connection with a body, constructed as above set forth, I provide a detachable handle B, the same consisting in two parts, viz., an upper portion 1. to be held by the hand of the operator when the iron is to be used, and which is consequently formed of wood, or of any other preferred material, adapted to remain cold, or cool when the iron is used, and which is preferably curved in form as shown in Fig. 1, and a lower part 2. of metal which carries the locking devices by which the handle B, is connected to the body A, which part 2. is secured to the upper part 1. by screws 3, and 4, the latter being shown by dotted lines.

I preferably form the lower part 2. in a single casting and provide the same with cut away portions, where the metal is not needed to strengthen said casting, for the purpose of reducing the weight thereof as much as possible, and I provide said casting, at or near its middle, with a forwardly and downwardly inclined lug 5, the lower end of which extends beneath the bar *b.* of the body A. when the handle B, is in operative connection with said body, as shown in Fig. 1.

I provide that the top 6, of the casting 2, between the lug 5, and the forward end of said casting, shall be cut away, as shown at 7, in Figs. 3, and 4, and that such cut away portion shall extend downwardly in one side of said casting, near its forward end, nearly to the bottom edge of said casting, as

shown at 8, see Figs. 3, 4, and 6, to provide a bearing wherein to fulcrum a bell crank lever C. See Figs. 1, and 2.

I provide that one arm 9, of the bell crank lever C, shall extend, within the cut away portion 7, from the bearing 8, in which said lever is fulcrumed, nearly, or quite to the forward end of the lug 5, to bear against the cross bar *b*, when the handle B, is in operative connection with the body A, and thus cooperate with said lug 5, to hold the handle securely in connection with the body A. I also provide that the remaining arm 10, of the bell crank lever C, shall extend, from the bearing 8, within which said lever is fulcrumed, upwardly beside the forward portion of the handle B, for some distance above the body A, and to insure that the operator shall not be burned when moving said lever to disengage the handle B. from the body A, I provide the upper end of said arm 10, with a knob 11, preferably of wood.

By reference to Fig. 1, see dotted lines in said Fig. it will be seen that forward pressure upon the knob 11, upon the bell crank lever C, will raise the lower arm 9, and thus move the end 12, of said arm from engagement with the cross bar *b*, of the body A, when it is desired to remove the handle B, from the body A.

I preferably provide that the bell crank lever C. shall be so constructed as to require no tooling when it is to be fulcrumed in the bearing 8, formed therefor in the metallic base of the handle, and to such end I provide that the lower end 13, of the arm 10, shall extend a short distance below the bearing point 14, of said lever, that is in contact with the surface of bearing 8, in the metallic base of the handle, as shown in Figs. 8, and 9, and that such lower end 13, shall bear against the outer surface of the metallic base of the handle, below the bearing 8, when the lever is in operative position, see Figs. 1, and 5, and I also provide that the arm 9, of said bell crank lever C, near to, and at its junction with the arm 10, of said lever, shall have an offset 15, the outer surface of which bears upon the inner surface of the metallic base 2, at one side of the bearing 8, therein, see Fig. 2.

From the foregoing described construction of the bell crank lever C, and the manner in which it is fulcrumed in its bearing 8, it will be readily apparent that it is not subject to lateral displacement, and that it is therefore only necessary to provide means for holding the fulcrum of said bell crank lever, within its bearing 8, to insure proper continuous action of such lever, and to such end I provide that the lower arm 9, of said lever C. shall, at its junction with the remaining arm 10, of said lever, be turned upwardly upon said arm 10, and extend thereon to the upper surface of the metallic base

2, of the handle B, as shown at 16, Fig. 5, and thus into contact with one end of the curved portion 1, of said handle, when the several parts thereof, are assembled and in operative position.

I provide that the arm 9, of the bell crank lever C, shall be normally maintained in its lowest attainable position, indicated by full lines in Fig. 1, by a spring 17, which placed upon the lower surface 18, of the metallic base 2, extends thence through the cut away portion 7 of said base, and bears at its outer free end, upon a rib 19 formed on the arm 9, and I further provide that said spring 17, shall aid in holding the metallic base 2, at one end, secured to the curved portion 1, of the handle B, to which end I provide said spring 17, with a suitable aperture for the passage of the screw 4, to, and into said curved section of the handle as shown in Figs. 1, and 2. The spring 17, extends above the arm 9 of the bell crank lever, the upturned end of said lever being notched, or cut away at 20, to provide room for said spring, as shown in Figs. 5, 9, and 10. This spring assists in preventing the displacement of the lever, as the lower surface of said spring bears lightly upon the upper surface of the notched portion of the arm, see Figs. 2, and 5. The full downward movement of the arm 9, of the bell crank lever C, is determined by a bar 21, which extends from side to side of the metallic base as shown.

The operation of my device will, it is thought, be apparent from the foregoing description, taken in conjunction with the drawings, it being understood that forward pressure upon the knob 11, of the bell crank lever C, will raise the arm 9, and the end 12, thereof from contact with the cross bar *b*, of the body A, and thus release the handle B. from engagement with the body A, while simply placing the lower curved surface of the arm 9, upon the bar *b*, and moving the handle B, forward with downward pressure, will cause the lug 5, to pass below said cross bar *b*, and thus secure the handle B, to the body A.

While I have herein set forth one embodiment of my invention, I do not desire to confine myself solely to such embodiment, since the main, and essential element comprised therein, to wit, a bell crank lever, connected to be operated at a distance above the heated body of a sad iron, to release a handle therefrom, may be arranged to be operated in different ways from that shown herein. I therefore claim the right to make and use, each and every modification of such bell crank lever, as shall fall within the scope, and limit of the following claims.

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

1. In a sad iron handle a base having a

stationary lug depending from and below its lower surface and provided with an inclined upper surface to extend below and into contact with the handle engaging bar of a sad iron, said base having its top slotted from above the depending lug to and opening through one side of the forward end of said base, a bell crank lever fulcrumed in the opening formed in the side of the base and extending upon one side of its fulcrum within the slot in the top of the base to bear as a strut against the handle engaging bar of the sad iron between its fulcrum and the depending lug and extending from another side of said fulcrum vertically above said base to be actuated to move the lever from contact with the handle engaging bar of the sad iron, substantially as described.

2. In a sad iron a section to be grasped by the hand, a base connected to said section and having a stationary lug depending therefrom to extend downward at one side of below and into contact with the handle engaging bar of a sad iron, said base having its top slotted from a point above the depending lug to and opening through one side of the forward end of the base to provide a bearing for a bell crank lever, a bell crank lever fulcrumed in the opening in the side of the base and extending thence as a strut from one side of said fulcrum and in the slot in the top of said base to and into contact with that side of the handle engaging bar that is opposite the side engaged by the depending lug and between said lug and the fulcrum of the lever and extending from another side of said fulcrum above the base and beside the section which is grasped by the hand to be actuated to swing the lever out of engagement with the handle engaging bar, and a spring to bear upon the lever to positively maintain one arm thereof in contact with the handle engaging bar, substantially as described.

3. In a handle for sad irons, a base having its side at one of its ends slotted to provide a bearing for a bell crank lever and having a depending inclined lug to engage with a handle engaging bar upon a sad iron, in combination with a bell crank lever to be fulcrumed in the slot in side of base, said

lever having a depending portion to bear upon the outer side of the base below the opening in said side and a shoulder to bear upon the inner surface of said side at one side of said opening, arms upon and extending from the fulcrum of said lever to and into contact with the handle engaging bar upon one side of said fulcrum and above the base upon another side of said fulcrum to be actuated to move the lever from engagement with the handle engaging bar of a sad iron, and a spring interposed between one arm of said bell crank lever and the lower surface of the base to hold said lever in position in its bearing and one end of said lever normally in contact with the handle engaging bar of a sad iron, substantially as described.

4. In a sad iron handle a section to be grasped by the hand, a base connected to said section and provided with a downwardly depending inclined lug to extend into contact with a handle engaging bar upon a sad iron, a slot formed through the top of said base from a point above the depending lug to and opening through one side of the base at one end thereof to form a bearing wherein to fulcrum a bell crank lever, and a bar rigid with and extending from side to side of the base below the slotted top thereof to support the bell crank lever and limit the downward movement thereof, in combination with a bell crank lever fulcrumed within the opening in the side of the base and having an arm extending from one side of said fulcrum in the slotted top of the base to contact with the handle engaging bar of the sad iron and an arm extending from another side of said fulcrum upwardly above said base to be moved and to move said lever, and a spring connected to maintain the lever in contact with the handle engaging bar, substantially as described.

In testimony whereof I affix hereto, my signature in presence of two witnesses.

FRANK H. KNIGHT.

Witnesses:

I. H. SHEAFFER,
M. C. STONER.