June 5, 1934. N. H. WATTS 1,961,805

HEAT GUARD

Filed Feb. 7, 1934

Fig. 1.

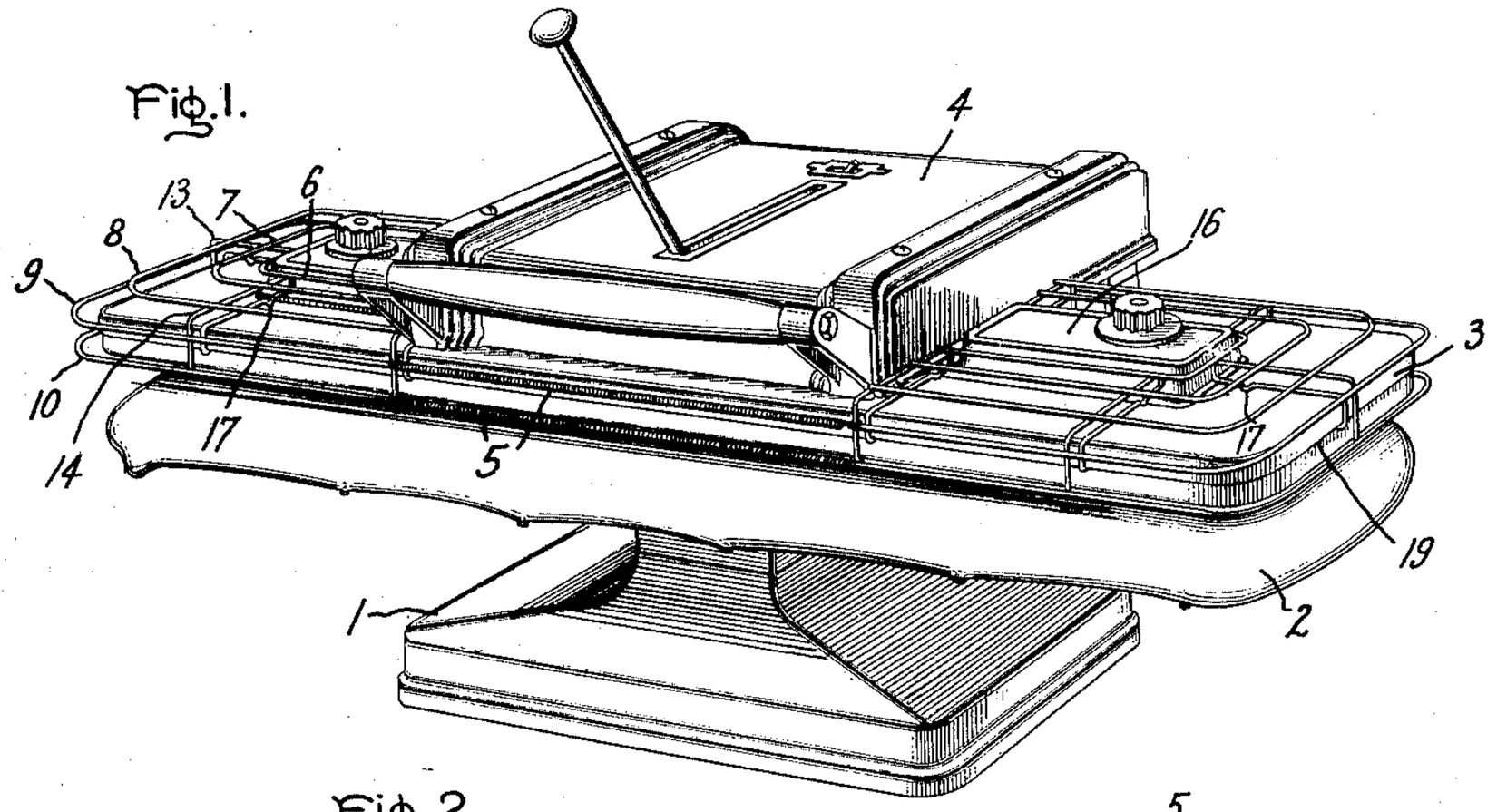


Fig. 2.

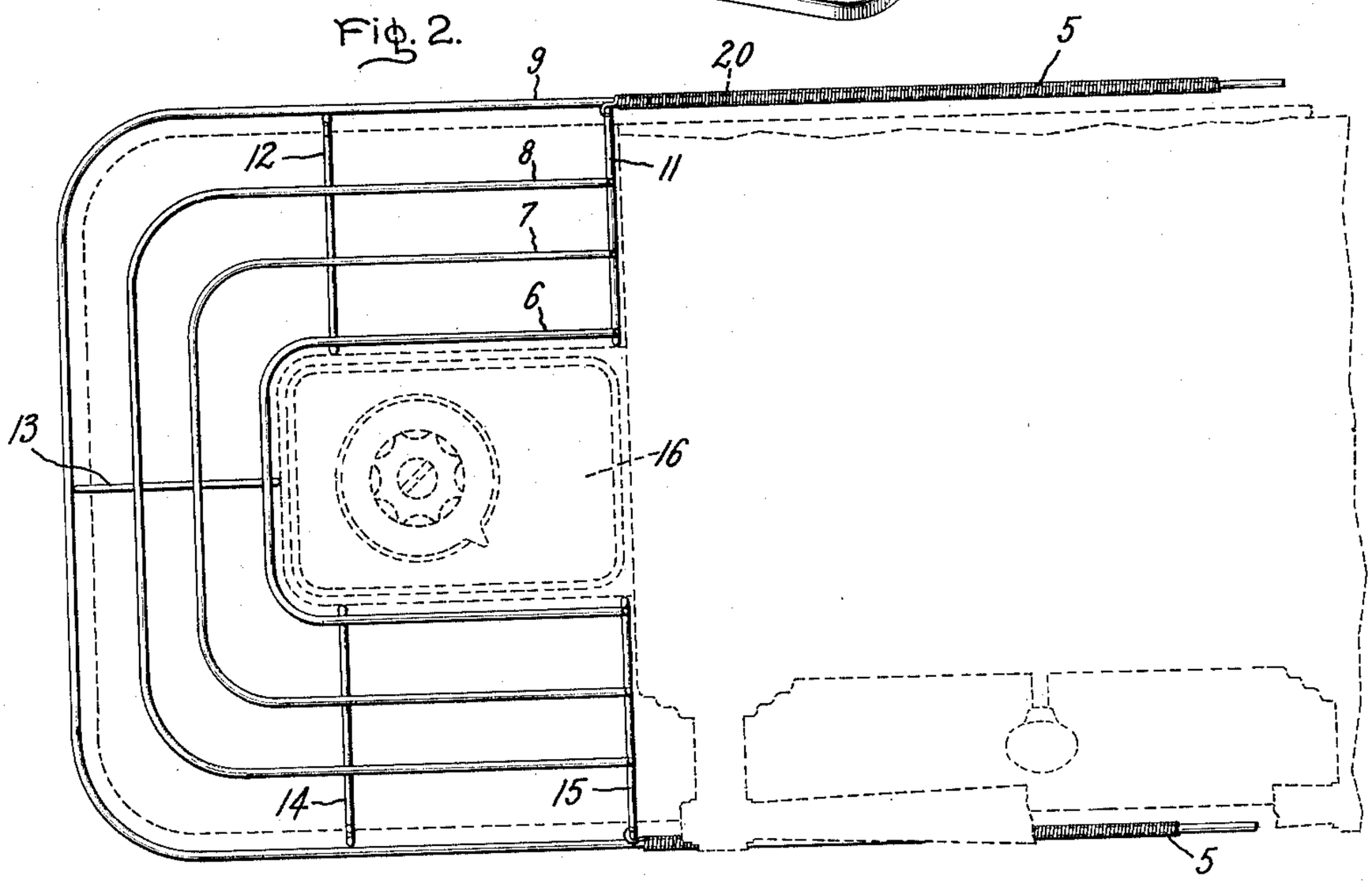


Fig. 3.

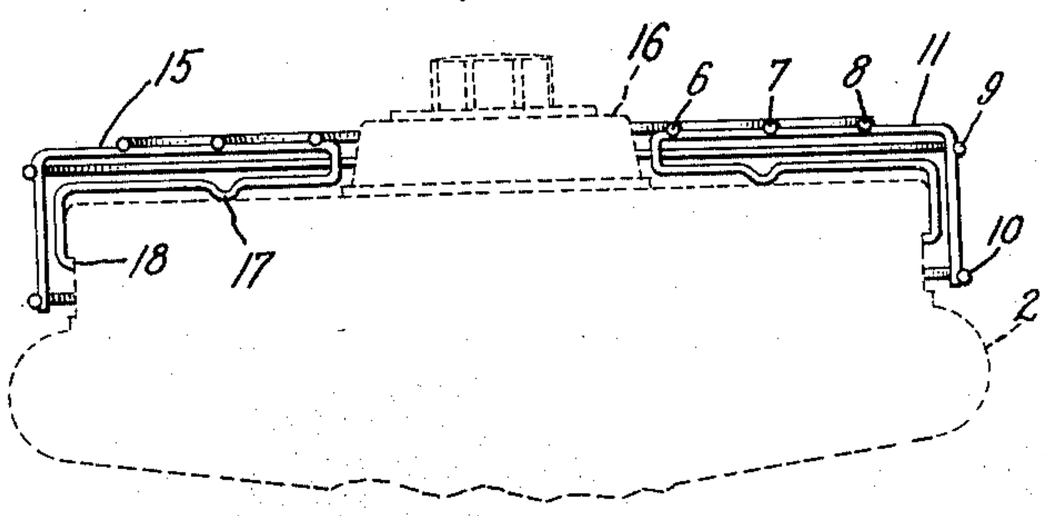
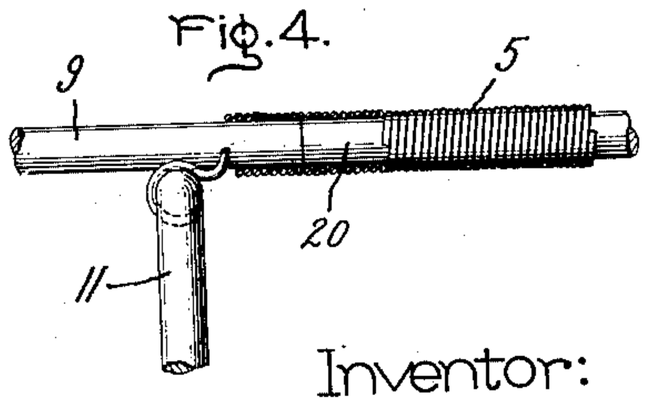


Fig. 4.



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UNITED STATES PATENT OFFICE

1,961,805

HEAT GUARD

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Application February 7, 1934, Serial No. 710,097

13 Claims. (Cl. 68—9)

This invention relates generally to heat guards and is directed more particularly to heat guards for protecting the operator of an ironing machine against burns from the metal shoe of the machine.

It is an object of this invention to provide an easily attachable and efficient heat guard for the shoe of an ironing machine.

Other objects of the invention will be apparent upon reference to the following detailed description of a preferred embodiment of the invention and to the drawing in which Fig. 1 illustrates the guard attached to the shoe of an electric ironing machine; Fig. 2 is a plan view illustrating the relation of the parts of one section of the guard; Fig. 3 is an elevation partly in section showing the manner of attaching the guard to the shoe; and Fig. 4 is a detailed view showing the manner of connecting the guard with the spring that connects or holds together the two sections of the heat guard.

The heat guard may be employed with any ironing machine. By way of example, it is shown employed with an electric ironing machine such as that disclosed in the co-pending application, Serial No. 632,365, filed September 9, 1932, in the name of Noble H. Watts. In the present application only so much of the structure of this machine as is necessary to an understanding of the present invention is described.

Referring now to the drawing, a pedestal 1 supports a buck 2 with which a shoe 3, preferably made of aluminum, cooperates. The heat guard, which is designed to protect the operator of the ironing machine against burns from the metal shoe 3, may be made in two or more sections in order that it may be readily attached to the shoe. The guard shown by way of example is, however, constructed in two sections each fitting over an end portion of the shoe on either side of the hood 4. The sections are connected with one another by garter springs 5 which cause the sections to have a certain resiliency when the guard is attached to the shoe.

Each section of the heat guard comprises a plurality of spaced metal ribs 6 to 10 inclusive and cooperating spaced metal rib supports 11 to 15 inclusive.

The ribs are similar in conformation to various portions of the top and sides of the shoe 3. The inner rib 6 of each section is arranged to circumscribe the metal box 16, integral with the shoe 3, which houses a heating unit (not shown) for heating a portion of the shoe as well as a thermostat (not shown) for controlling the heating unit. The outer ribs 9 and 10 circumscribe, respectively, the top and bottom of the side wall of the shoe 3. The inner ribs 7 and 8 are similar in conformation to various portions of the top surface of the shoe, as is shown in Fig. 1. Although only five ribs are shown in each section of the heat guard illustrated, it is evident that the number of ribs employed in each section of the guard may be changed at will. It is also evident that the ribs may be made similar in conformation to shoes of various designs.

The ribs of each section are attached to and spaced from the surface of the shoe 3 by the rib supports 11 to 15, inclusive, which are disposed transversely with respect to the ribs. Each support has an upper portion to which the ribs of the section are attached by welding or any other suitable means and a lower portion spaced from the upper portion and connected to it by a hair-pin bend in the rib support. The lower portion of each rib support has a projection 17 adapted to bear against the top of the shoe and an elbow 18 adapted to fit over a ridge 19 on the side of the shoe. By positioning a section of the guard over an end portion of the shoe and then pressing the section down until, as shown in Fig. 3, the elbow 18 on each rib support snaps over the ridge 19 on the side of the shoe, the section of the guard is attached and locked to the shoe. Each section of the guard, when attached to the shoe, is in contact with the shoe only where the projection 17 and the elbow 18 of the rib supports 11 to 15 bear upon the shoe. Since the guard thus makes contact with the shoe at a relatively small number of points and since the ribs of the guard are spaced from the shoe as well as from one another, the temperature of the guard remains comparatively low regardless of the temperature of the shoe.

As the shoe is moved frequently while the ironing machine is in operation, the sections of the guard might work loose from the shoe if held by the rib supports alone. It is therefore preferred to provide additional means for holding the sections of the guard in position on the shoe. For this purpose the sections of the guard are arranged to be connected with one another by a number of attachable springs 5. Any desired number of springs may be used for this purpose though in the example illustrated but three springs are shown, two being connected between the sections at the front of the machine and one between the sections at the rear of the machine. These springs, see Fig. 4, have their opposite ends attached to corresponding rib supports 11 or 15 in each section, and as they pull each of the sections towards the center of the shoe, they consequently give the heat guard, when in position on the shoe, a certain resiliency which tends to hold the guard firmly on the shoe despite movements of the latter incidental to the operation of the ironing machine.

It is preferred to keep the springs 5, when in position, spaced from the shoe 3. This is effected by positioning a rod 20 within each spring,

then fitting the ends of the spring over the end of a corresponding rib 9 or 10 in each section, and finally attaching the hooked ends of the spring to adjacent rib supports in each section. The rod 20 within the spring then abuts at opposite ends against the ends of the ribs, which extend some distance within the spring, thereby holding the spring spaced from the shoe 3.

In order to remove the heat guard from the shoe, the springs 5 are merely detached from the rib supports 11 and 15 of the two sections thus separating the sections, and then the two sections are removed from the shoe.

It is apparent from the foregoing description that the invention provides for use with an ironing machine a heat guard which can be readily attached to or removed from the shoe of the machine. It also provides a heat guard which is in contact at only a relatively few points with the shoe of the ironing machine and which consequently has a relatively low temperature regardless of the temperature of the shoe.

The invention is not to be restricted to the particular form or arrangement of the parts shown or described herein as it is apparent that these may be changed or altered without departing from the scope of this invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe.

2. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports disposed transversely to the ribs for attaching the ribs to the shoe and for spacing the ribs from the shoe.

3. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports, each rib support having an upper portion to which the ribs are attached and a lower portion spaced from the upper portion for attaching the ribs to the shoe.

4. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports each having an upper portion attached to the ribs and a lower portion spaced from the upper portion and provided with a projection for engaging the top of the shoe and an elbow for engaging a ridge on the side of the shoe.

5. A heat guard for the shoe of an ironing machine comprising a plurality of sections adapted to enclose spaced end portions of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe.

6. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs similar in conformation to portions of the shoe surface enclosed by the section, and a plurality of rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe.

7. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs some of which are similar in conformation to portions of the top of the shoe and the remainder of which are similar in conformation to portions of the sides of the shoe, and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe.

8. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports adapted to make contact with the shoe at a relatively small number of points for attaching the ribs to the shoe and for spacing the ribs from the shoe.

9. A heat guard for the shoe of an ironing machine comprising a plurality of sections, each adapted to enclose a division of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports each having an upper portion attached to the ribs and a lower portion spaced from the upper portion and adapted to make contact with the shoe at a relatively small number of points for attaching the ribs to the shoe.

10. A heat guard for the shoe of an ironing machine comprising a plurality of sections for enclosing spaced divisions of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe, and attachable springs for interconnecting adjacent sections of the guard.

11. A heat guard for the shoe of an ironing machine comprising a plurality of sections for enclosing spaced divisions of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe, and springs attachable to adjacent rib supports of adjoining sections for interconnecting said sections.

12. A heat guard for the shoe of an ironing machine comprising a plurality of sections for enclosing spaced divisions of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe, springs attachable to adjacent rib supports of adjoining sections for interconnecting said sections, and means for spacing said springs from said shoe.

13. A heat guard for the shoe of an ironing machine comprising a plurality of sections for enclosing spaced divisions of the shoe surface, each section having a plurality of spaced ribs and a plurality of spaced rib supports for attaching the ribs to the shoe and for spacing the ribs from the shoe, springs attachable to adjacent rib supports and positionable over the ends of corresponding ribs of adjoining sections, and a rod positionable in each spring and abutting against the rib ends over which the spring is positioned for spacing the spring from the shoe.

NOBLE H. WATTS.