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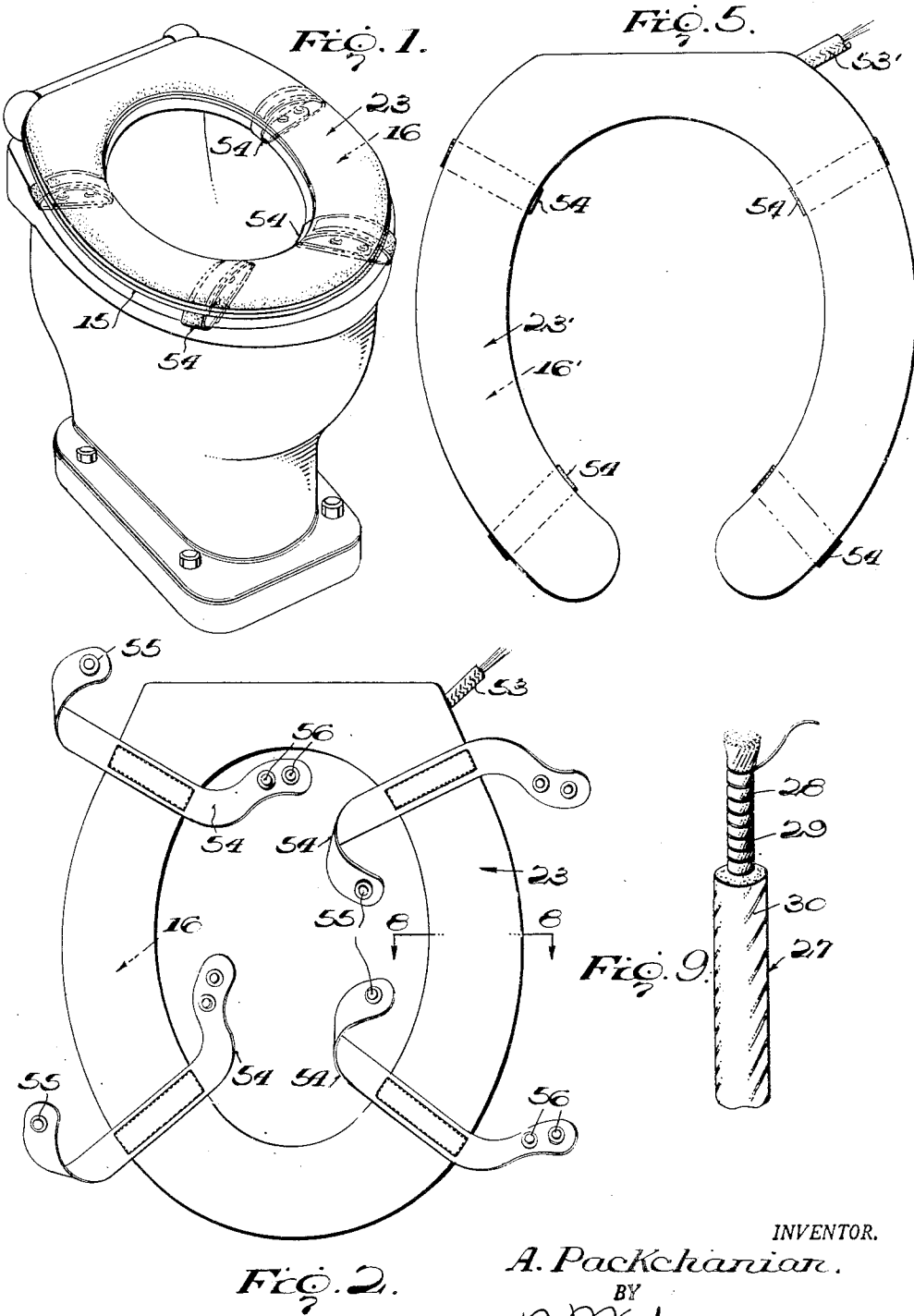
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HEATING ATTACHMENT FOR TOILET SEATS

Filed May 26, 1953

2 Sheets-Sheet 1



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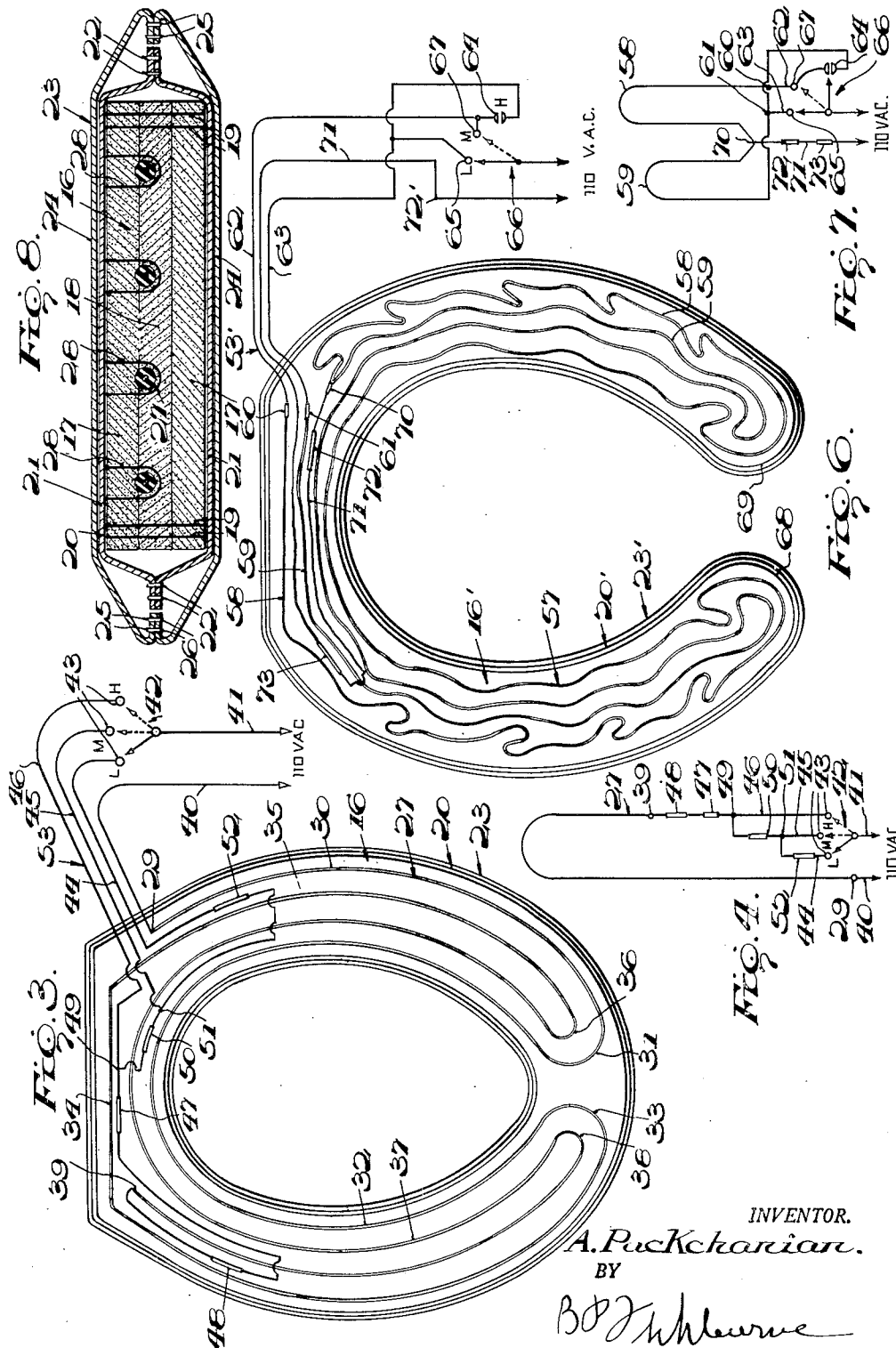
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2 Sheets-Sheet 2



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## HEATING ATTACHMENT FOR TOILET SEATS

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4 Claims. (Cl. 219—46)

My invention relates to a heating device for toilet seats.

A primary object of the invention is to provide a heating device in the form of an attachment for toilet seats, the device being readily applicable to substantially any toilet seat without altering or changing the seat in any manner.

A further object is to provide an electrically operated attachment of the above mentioned character, which is simplified in construction, reliable and safe in operation, sanitary, comfortable, and relatively cheap to manufacture.

A further object is to provide a heating attachment for toilet seats, having means permitting the individual to regulate the temperature of the attachment at will.

A still further object is to provide a heating attachment of the above mentioned character which is readily removable from the toilet seat for the purpose of laundering the outer cover of the attachment, etc.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is perspective view of a toilet seat heating attachment embodying the invention, and showing the same applied to a toilet seat,

Figure 2 is a bottom plan view of the attachment shown in Figure 1,

Figure 3 is a plan view, partly diagrammatic of the attachment,

Figure 4 is a wiring diagram of the electrical circuit embodied in the heating attachment of Figure 1,

Figure 5 is a plan view of a toilet seat heating attachment embodying a modification of the invention,

Figure 6 is a further plan view, partly diagrammatic of the device shown in Figure 5,

Figure 7 is a wiring diagram of the electrical circuit embodied in the form of attachment shown in Figure 5,

Figure 8 is an enlarged typical cross section through either form of attachment, taken on line 8—8 of Figure 2,

Figure 9 is an enlarged fragmentary perspective view of an electrical heating element, as embodied in both forms of the seat warming attachment.

In the drawings, where for the purpose of illustration are shown preferred embodiments of the invention, attention is directed first to Figures 1 to 4, and 8 and 9, wherein a heating attachment for a closed or continuous type toilet seat 15, Figure 1, is illustrated.

The attachment comprises an internal pad 16 of substantial thickness, and conforming marginally to the marginal shape of the continuous seat 15 to which it is applied. The pad 16 is preferably of three ply construction, Figure 8, consisting of two outer layers or plies 17 of fire resistant quilted cotton, or the like, and an intermediate layer 18 of loose fire resistant cotton batting or filler. The three layers are preferably stitched together in contacting superposed relation, by lines of stitching 19, extending continuously along the inner and outer margins of the pad 16, Figure 8.

The entire pad 16 and heating element, to be described, contained therein is inclosed within a flexible cover or envelope 20, of sheet rubber, sheet plastics material, or the like. The cover 20 is preferably formed of two cover sections 21, Figure 8, stitched together about their marginal edges by lines of stitching 22.

The attachment is further inclosed within an external cover or jacket 23 of washable blanket material, chenille

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goods, or the like, and the cover 23 may be of any preferred color or design. The outer cover 23 is likewise preferably formed of a pair of cover sections 24, stitched together by marginal lines of stitching 25. In practice, the tubular outer cover 23 is first stitched and then turned inside out, prior to joining the ends of the tubular cover in any preferred manner.

As previously stated, and clearly shown in Figure 3, the pad 16 has the shape of the toilet seat 15. The inner and outer covers 20 and 23 likewise have the same shape as the toilet seat 15 and pad 16, the covers completely inclosing the pad, as shown.

An electrical heating element 27 is provided, and this element preferably comprises a core 28 of asbestos rope, or the like, upon which is wound spirally a fine resistance wire 29. The core 28 and wire 29 are inclosed in an asbestos wrapper or sheathing 30, which serves to reduce the intensity of heat produced by the element 27.

The heating element 27 is inclosed between the uppermost quilted cotton layer 17 and the intermediate loose layer 18, Figure 8. In practice, the heating element 27 is laid upon the loose cotton layer 18 prior to applying the uppermost layer 17 thereto, and the heating element is substantially embedded within the soft layer 18 of cotton, as shown. Substantially U-shaped stitches or ties 28 are passed through the cotton layers 17 and 18 and looped about the heating element 27, at spaced intervals longitudinally along the heating element. These ties 28 prevent the strands or sections of the heating element 27 from shifting laterally inside of the cotton pad 16.

As best shown in Figure 3, the heating element 27 is formed to the shape of the pad 16 carrying it and toilet seat 15. One end 29 of the heating element 27 terminates near a rear corner of the pad 16, and near the outer margin of the pad, Figure 3. From its end 29, the heating element 27 is formed into a first outer loop 30 extending near the inner and outer margins of one side of the pad 16 and having a forward loop side 31. The heating element 27 extends at the rear end of the pad 16 along the inner and outer margins of the other side of the pad to form a second outer loop 32 having a forward loop side 33. The heating element continues from the outer side of the loop 32 at the rear end of the pad 16 to form a straight transverse portion or run 34, and from the run 34 the heating element 27 is continued to form a first inner loop 35, inside of the first outer loop 30, and having a forward loop side 36, inwardly of the loop side 31. The heating element continues from the inner side of the first inner loop 35 to form a second inner loop 37, inside of the second outer loop 32, and having a forward loop side 38. The other end 39 of the heating element 27 terminates with the outer side of the second inner loop 37, near the other rear corner of the pad 16, Figure 3.

As shown diagrammatically in Figures 3 and 4, the end 29 of heating element 27 is electrically connected with one wire 40 of a cable supplying house current to the heating attachment. The other wire 41 of the cable or supply line has connected in it a three-position switch 42 having low, medium and high terminals 43. The terminals 43 are connected with three jumper wires 44, 45 and 46. The jumper wire 46 enters the pad 16 and after passing across the rear end portion of the pad is electrically connected in series with the heating element 27 at its end 39. The jumper wire 46 has two resistance elements 47 and 48 electrically connected therein in series, as shown. The jumper wire 45 enters the pad 16 and is electrically connected at 49 with the jumper wire 46. The jumper wire 45 has a single resistance element 50 connected therein, in series with the resistance elements 47 and 48. The jumper wire 44 enters the pad 16, and is electrically connected at 51 with the jumper wire 45, Figures 3 and 4. The jumper wire 44 likewise has a single resistance element 52 electrically connected therein in series with the other resistance elements 50, 47 and 48. A suitable opening is, of course, formed in the inner and outer covers 20 and 23, adjacent to one rear corner of the pad 16 for the passage into the pad of the cable 53 comprised of the wires 40, 44, 45 and 46, Figure 2.

The outer cover 23 of the attachment has elastic straps 54 stitched to its bottom side, Figure 2, and extending transversely thereof, preferably at four points about the

attachment, near its forward and rear ends. The elastic straps 54 are provided near their opposite ends with male and female snap fastener elements 55 and 56, to facilitate fastening the straps about the toilet seat 15, after the straps have been looped downwardly about the same. Since the straps 54 are elastic, and two female snap fastener elements 56 are provided on each strap, considerable adjustment of the straps is possible, so that the attachment is applicable to substantially any toilet seat, regardless of its particular shape in cross-section.

The completed attachment covers the entire toilet seat 15, and is quite soft and comfortable. The heating element 27 is embedded near the center of the thick pad 16, so as not to make the attachment uncomfortable, and to cut down on the intensity of heat produced by the device.

In operation, with the switch 42 adjusted across the low terminal 43, current will flow from the wire 41 through the jumper wire 44, resistances 52, 50, 47 and 48 and into the heating element 27, through its end 39. The several resistances will, of course, reduce the current value, the voltage being constant, and a low heat will be produced by the heating element 27 when the switch 42 is on the low position. When the current has passed entirely through the heating element 27 including all of its series connected loops 32, 37, 35 and 30, it reaches the end of 29 of the heating element, and passes through the wire 40 to complete the circle.

When the switch 42 is adjusted to the medium heat terminal 43, the current passes through the jumper wire 45 and resistances 50, 47 and 48 before reaching the end of the heating element at 39. In this instance, the fewer number of resistance elements allows a greater current value to pass through the heating element 27, and back to the wire 40, and accordingly, more heat is produced by the heating element.

When the switch 42 is adjusted to the high terminal 43, current passes through the jumper wire 46, and resistances 47 and 48, before reaching the end 39 of heating element 27. Since the current now passes through only two resistance elements, prior to passing through the heating element 27, a greater current value enters the heating element, and produces a more intense heat for the high position of the control switch 42.

The switch 42, shown diagrammatically in the drawings, may be conveniently located within reach of the user in a bathroom or the like, and the individual may control the intensity of heat produced by the attachment, as found desirable.

In a modification of the attachment, illustrated in Figures 5 to 7 inclusive, of the drawings, the device is designed for use upon a toilet seat of the type which is open or split at the front. Except for this difference in construction, the physical construction of the heating attachment in Figures 5 to 7 is substantially identical with that of the heating attachment embodied in the first form of the invention. Figure 8, therefore, which is a cross-sectional view through one side of the attachment, is typical of both forms of the invention, as previously stated, and it is believed to be unnecessary to further describe the physical construction of the device shown in Figures 5 to 7 inclusive.

Electrically, the attachment of Figures 5 to 7 is somewhat different from the attachment in the first form of the invention. As shown in Figures 6 and 7, a heating element 57 identical in construction with the element 27 of Figure 9 is mounted within a pad 16', identical with the pad 16, except for the opening at the front of the same. The heating element 57 comprises a pair of sections 58 and 59 having corresponding ends electrically connected at 60 and 61 with wires 62 and 63, leading outside of the attachment, and in turn electrically connected respectively at 64 and 65 with the high and low heat terminals of a three-position switch 66, also having a medium heat terminal 67. The heating element sections 58 and 59 extend in a generally counterclockwise direction, Figure 6, through the left hand side of the pad 16' to the end 68 thereof. The sections 58 and 59 then double back in the generally clockwise direction along the same side of the pad 16', and then continue to extend generally clockwise along the right hand side of the pad 16', Figure 6, to the end 69 of the pad. The heating element sections 58 and 59 then extend in a generally counterclockwise direction, Figure 6, back along the right hand side of the pad 16', and the other corresponding

ends of the sections 58 and 59 are electrically connected at 70 to a wire 71, having two resistance elements 72 and 73 electrically connected in series therein, the wire 71 leading outside of the attachment, as shown in Figure 6. The wire 71 is connected at 72' directly into one wire of the power cable or line supplying current to the device, the other wire of the line having the switch 66 connected therein, as shown.

It is to be noted in the form of the invention shown by Figure 6, that the sections 58 and 59 of heating element 57 follow a wavy path through the pad 16', for the purpose of imparting greater length to the heating element.

All other parts of the attachment are identical with those shown and described in connection with the first form of the invention.

In operation, with the switch 66 adjusted to the low heat terminal 65, current flows from the low heat terminal through the wire 63 to the point 61, and thence through the heating element section 59 for its entire length, to the point 70. From here, the current flows through the wire 71 and through the two constant resistance elements 72 and 73 connected therein, and thence back to the other side of the power line at the point 72', Figure 6.

When the switch 66 is adjusted to the medium heat terminal 67, current will flow from this terminal through the wire 62 to the point 60, and thence entirely through the heating element section 58 to the point 70. The current then enters the same wire 71 having the resistance elements 72 and 73, and the circuit is completed at 72'. The appliance produces greater heat when the switch 66 is adjusted to the medium heat terminal 67, because the path traversed by the current through the heating element section 58 is longer than the path through the section 59, connected with the low heat terminal 65, Figure 7. When the switch 66 is shifted to the high heat terminal 64, current passes from that terminal, which is a split terminal, as shown, through both of the wires 62 and 63 simultaneously, to the points 60 and 61, and then through both of the heating element sections 58 and 59, in parallel, to the point 70. The current then flows through the wire 71 having the constant resistance elements 72 and 73, back to the other side of the line at 72'. This arrangement, of course, produces the most intense heat since the same current value passes through both heating element sections 58 and 59 simultaneously. The user of the appliance has the same control over the heating element 57, through the three position switch 66, as was the case in the first form of the invention with the switch 42.

It is to be understood that the forms of the invention, herewith shown and described are to be taken as preferred examples of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of the invention or scope of the subjoined claims.

Having thus described my invention, I claim:

1. A heating pad attachment for permanent toilet seats comprising a yieldable pad body portion of substantial thickness to be mounted upon the permanent toilet seat and substantially coextensive therewith, an electrical heating element enclosed within the pad body portion and extending throughout a major portion of the length of the same for imparting heat, a first cover of flexible moistureproof material enclosing the pad body portion and conforming substantially to the shape of the pad body portion, an outer flexible decorative cover enclosing the first cover and pad body portion and conforming substantially to the shapes of the same, straps secured to the bottom side of the outer cover at longitudinally spaced points thereon and extending transversely thereof and adapted to be passed about the permanent toilet seat for securing the attachment thereto, and switch means connected with the electrical heating element for regulating the flow of current through the same.

2. A heating pad attachment for a permanent toilet seat comprising a substantially thick pad body portion of yieldable cottonlike material substantially coextensive with the permanent toilet seat, an electrical heating element embedded within the pad body portion inwardly of the sides of the same and extending throughout a major portion of the pad body portion, a first flexible covering of moisture resistant material for the pad body portion

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enclosing the same, an outer fabric covering for the pad body portion and first covering and enclosing the same, a plurality of flexible elongated elements secured to one side of the outer fabric covering and adapted to be looped around the permanent toilet seat and secured thereto for detachably securing the pad attachment to the permanent toilet seat, and a remotely controlled switch device connected with said electrical heating element for regulating the passage of current therethrough.

3. A heating attachment for a continuous type closed toilet seat comprising a pad to be mounted upon the toilet seat and substantially coextensive with the continuous toilet seat, a first cover of waterproof material enclosing the pad and conforming substantially to the shape of the pad, an outer fabric cover enclosing the first cover and pad, a continuous electrical heating element enclosed within the pad and extending through a major portion of the length of the pad, a plurality of resistance elements electrically connected in series with the heating element, and a remotely controlled multi-position switch connected with the heating element for controlling the passage of current through the heating element and through certain of or all of said resistance elements.

4. A heating attachment for a split type toilet seat comprising a pad for attachment to the seat and being substantially coextensive with the seat and having an opening, a first moistureproof cover for the pad substantially enclosing the same and conforming generally

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to the shape of the pad, an outer fabric cover for the first cover and pad substantially conforming to the shape of the pad, strap means carried by the fabric cover and adapted to surround the toilet seat for detachably securing the attachment thereto, electrical heating element sections enclosed within the pad and extending through a major portion of the pad and electrically connected in parallel, one heating element section being longer than the other heating element section, and a multi-position control switch connected with the heating element sections and adjustable to permit current to pass through either heating element section and through both heating element sections simultaneously.

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