I. S. MERRELL.

COMMUNICATION CONTROLLING DEVICE.

APPLICATION FILED MAY 17, 1919.

1,340,552. Patented May 18, 1920.

Fig. 1.

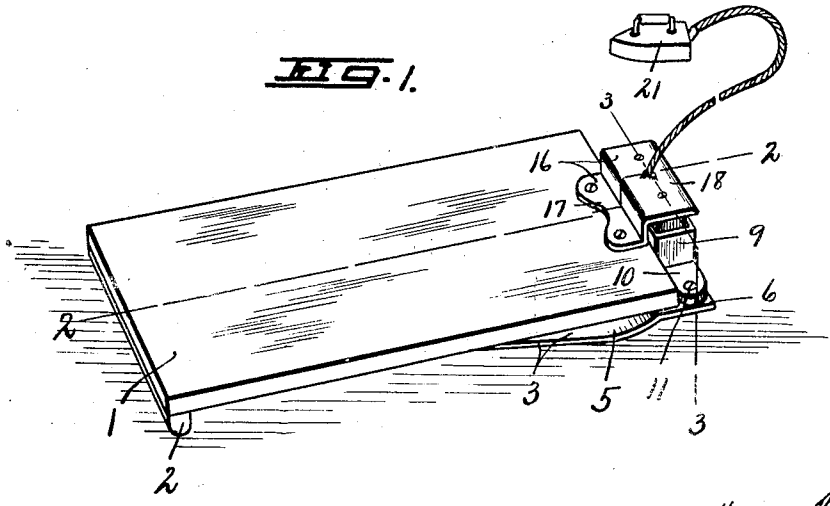


Fig. 2.

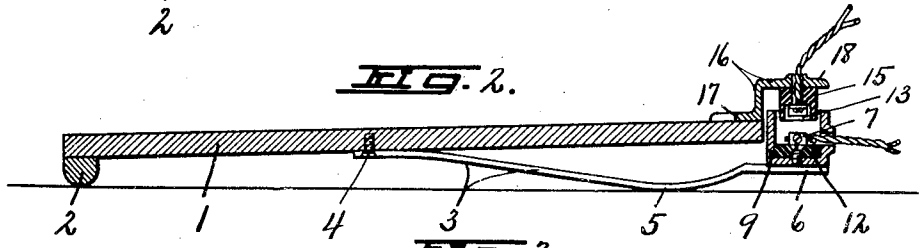


Fig. 3.

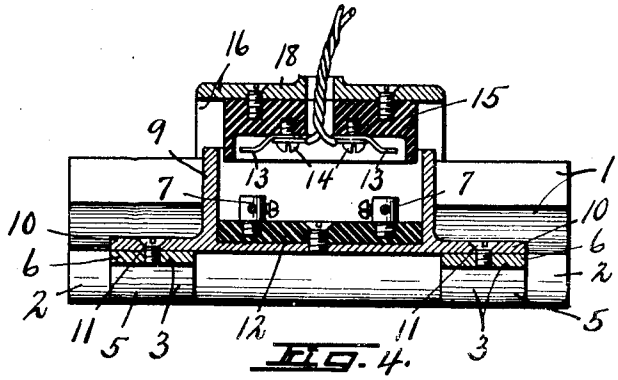
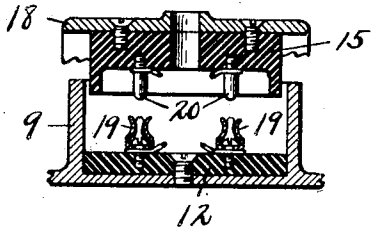


Fig. 4.



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UNITED STATES PATENT OFFICE.

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COMMUNICATION-CONTROLLING DEVICE.

1,340,552. Specification of Letters Patent. Patented May 18, 1920.

Application filed May 17, 1919. Serial No. 297,935.

To all whom it may concern:

Be it known that I, IRVING S. MERRELL, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Communication-Controlling Devices, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in communication controlling devices, and is particularly adapted and designed for use in connection with electrically heated irons and the like and broadly, in concept, relates to a means of controlling communication adapted to be pedal operated, as by the weight or the absence of weight of an operator.

The primary object of the invention resides in means for opening and closing communication between an element to be heated and a source of heat supply, allowing the passage or the interruption of the passage of a heating medium from the source of supply to the element to be heated. The medium may be any known heating medium, such as electricity, steam, etc., and I have illustrated specifically an application of the invention in the use of electric heating medium. Preferably the interruption of the passage of the heating medium is automatically accomplished and a broken circuit is the normal condition.

In the use of internally heated devices, such as electrically heated irons, the user, in leaving the iron, very often forgets to break the circuit leading to the iron, resulting perhaps in over-heating of the iron, and in many cases burning of the article being ironed, and in some instances directly causing fires.

Further, the present means for making and breaking of the circuit is normally manually operated and is often positioned at a considerable distance from the iron, and in order to control the temperature of the iron when in use it is necessary to interrupt the work in order to turn the current on and off, and in either condition the circuit remains closed or broken until manually varied.

These dangers and difficulties are largely, if not entirely, obviated by the utilization of the disclosure of this invention, in which the circuit is pedal closed when the user of the iron stands in a predetermined position, and is automatically broken when the user leaves that position.

Further, the temperature of the iron is readily controlled in use by the movement of the operator to and from a predetermined position, either closing or allowing the automatic breaking of the circuit.

Other objects, uses and advantages will appear from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of the device.

Fig. 2 is a cross section on line 2—2, Fig. 1.

Fig. 3 is a cross section on line 3—3, Fig. 1.

Fig. 4 is a view similar to Fig. 3, illustrating a modified and perhaps preferable form of the contact members.

The specific application of the invention as shown herein embodies a platform —1— of any suitable or desirable size, shape and material. One end of the platform is adapted to rest upon any suitable supporting surface, as a floor, and for this purpose is preferably provided with a spacing member —2— of any desired shape and of any suitable material, preferably secured to the platform adjacent the said end and may be an elongated strip of rubber or the like, preferably convex or curved at its lower edge to form a rocking surface about which the platform may move, as hereinafter described.

The opposite end of the platform is supported by suitable movable or resilient means, such as a spring or springs —3—, preferably running substantially parallel with the longitudinal medial line of the platform, and in this specific illustration two springs are disclosed as spaced apart and at one of their ends secured to the intermediate portion of the platform by any suitable means, as screws —4—, said springs having their intermediate portions —5— bowed downwardly and their opposite ends substantially horizontally disposed and spaced from the supporting means upon which the points of greatest projection of the bowed portion of the springs rests.

The flat end portions —6— may begin just at the rear of the adjacent end portion of the platform and extend forwardly some distance beyond the platform to support a contact or pair of contacts —7— which may be carried within and insulated from a box —9— having projecting flanges —10— upon its opposite ends, said flanges adapted to rest upon respective springs —3— and secured to said springs in any suitable manner, as by screws —11—.

The contacts —7— may be insulated from each other in any suitable manner, as by the insulating plate —12— carried within the box —9—. The flow and return wires may be connected respectively to the contacts —7— in any suitable known manner.

The platform —1— at the end adjacent the box —9— carries a pair of contacts —13— adapted for respective co-action with the contacts —7—. In the specific illustration of Fig. 3, the contacts —7— may be formed as shown, while the contacts —13— are spring members adapted to have a certain resilient action when brought into circuit closing relation with respect to the contact —7—. The contacts —13— may be supported in any suitable manner, as by screws —14—, engaged with an insulating plate —15—, which plate is carried by an angular bracket —16— having a portion —17— secured to the adjacent end of the platform —1— and a second portion —18— offset from the plane of the portion —17— and disposed above the platform.

The insulating plate —15— is of a size adapted to fit or telescope within the box —9— so that pressure applied upon the platform —1— will move the contacts —13— into circuit closing relation with the respective contacts —7—, and in order to prevent any particular strain being applied to the bracket —16— or the box —9— the platform —1— is normally spaced from the horizontal portion —6— of the spring —3— a distance somewhat less than the normal distance between the upper edge of the box —9— and the lower surface of the horizontal portion —18— of the bracket —16—.

The construction shown in Fig. 4 is similar in all respects to that of Fig. 3 except that the contacts —19— are formed of a series of substantially vertically disposed spring fingers arranged to form a central substantially tubular space contracted at its intermediate portion for the reception of contacts —20— in the form of cylindrical pins of greater diameter than the diameter of the contracted portion of the contacts —19—. This latter form of co-acting contact is perhaps preferable, in that it allows of considerable relative movement of respective contacts after the circuit is closed so that tilting of the platform —1— will not materially affect the closing of the circuit.

The contacts —13— or the contacts —20— are connected, as by suitable feed and return wires, to an electrically heated iron —21—.

The operation of the device will be readily understood. The weight of an operator will depress the platform —1— against the action of the supporting springs —3— and carry the bracket —16— with contacts —13— downwardly until the platform contacts with the horizontal portion —6— of the spring, and before this point is reached the coacting contacts have been brought into circuit closing relation. After this point is reached, the weight of the operator is transferred by the platform directly to the spring —3— relieving the bracket and the contacts of unnecessary strain. All of the contacts are insulated from the supporting members and this is essential in constructing devices of this character utilizing high voltage current.

Although I have shown and described one particular construction of device and its application to one specific use, I do not desire to limit myself to any particular construction or any particular adaptation, as many changes may be made in the details of construction and operation, and in the adaptation of the invention to various uses, without departing from the spirit of the invention as set forth in the appended claims.

What I claim is:

1. In a communication controlling device, a platform, a spring, an electric terminal carried by the platform and insulated therefrom, a second electric terminal carried by the spring and insulated therefrom, said terminals brought into circuit closing relation by relative movement of said platform and spring.

2. In a communication controlling device, a platform, a spring, an electric terminal carried by the platform and insulated therefrom, a second electric terminal carried by the spring and insulated therefrom, said terminals brought into circuit closing relation by depression of the said platform against the action of the spring.

3. A communication controlling device comprising a platform, an insulating member carried thereby, a contact carried by the insulating member, a spring, an insulating member carried by the spring, a contact carried by the insulating member, said contact brought into circuit closing relation by relative movement of said platform and spring.

4. A communication controlling device comprising a platform, a spring connected to the platform and extending beyond the platform, a contact carried by the portion of said spring extending beyond the platform, insulation between the spring and contact, a contact carried by the adjacent end of the platform and insulated from the platform, said contacts brought into circuit closing relation by depression of the plat-

form in opposition to the tension of said spring.

5. In a communication controlling device, a platform, an elongated spring bar having one end secured to the platform and its intermediate portion bowed away from the platform and its other end portion spaced from and unconnected to the platform, a communication device carried by the end of said bar unconnected to the platform, a second communication device carried by the platform, said communication devices adapted to be brought into communication closing relation by relative movement of said platform and spring bar.

6. In a communication controlling device, a platform, an elongated spring bar having one end secured to the platform and its intermediate portion bowed away from the platform and its other end portion spaced from and unconnected to the platform, a communication device carried by the end of said bar unconnected to the platform, a second communication device carried by the platform, said communication devices adapted to be brought into communication closing relation by relative movement of said platform and spring bar, the maximum relative movement of the contacts toward each other being greater than the distance between the platform and the end of said spring unconnected to the platform.

7. In a communication controlling device, a platform, a pair of elongated spring bars carrying the platform and having one end connected to the platform and their intermediate portions bowed away from the platform and their opposite end portions spaced from, unconnected to, and extending beyond the platform, a box-like structure carried by the ends of said springs extending beyond the platform, communication devices within the box-like structure, a bracket carried by the platform and extending over the box-like structure, communication devices carried by said bracket, said communication devices adapted to be brought into communication closing relation by depression of said platform against the elevating action of said spring.

In witness whereof I have hereunto set my hand this 12th day of May, 1919.

IRVING S. MERRELL.

Witnesses:

H. E. CHASE,

E. A. THOMPSON.