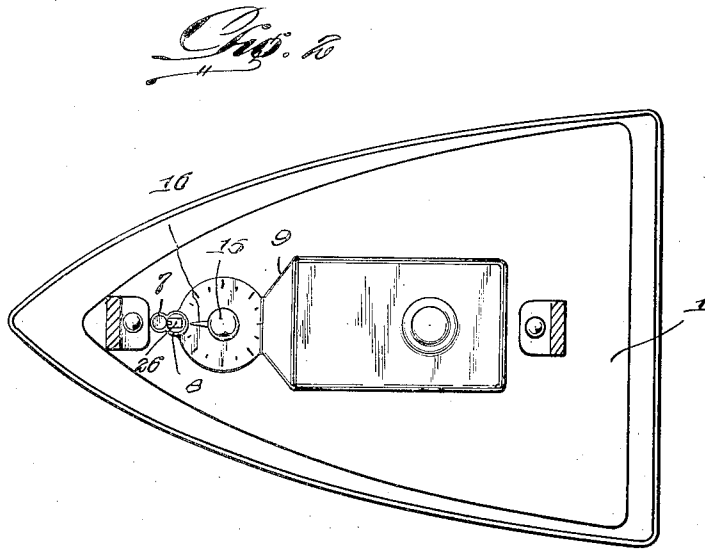
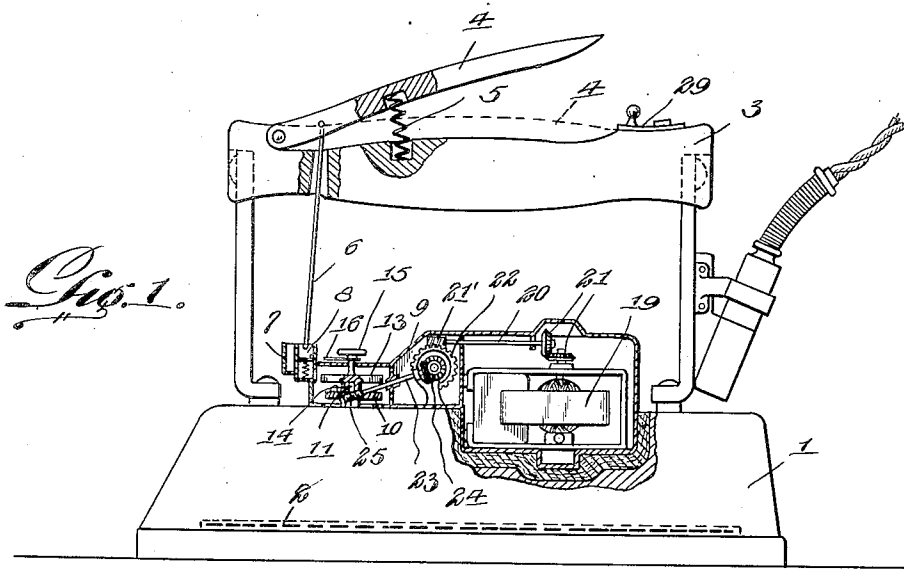


J. A. OCA-BALDA.
ELECTRIC IRON.
APPLICATION FILED OCT. 7, 1919.

1,366,480.

Patented Jan. 25, 1921.
2 SHEETS—SHEET 1.



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Fig. 3.

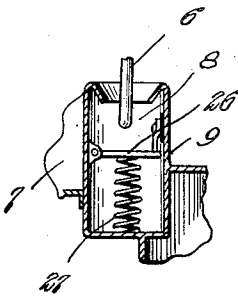
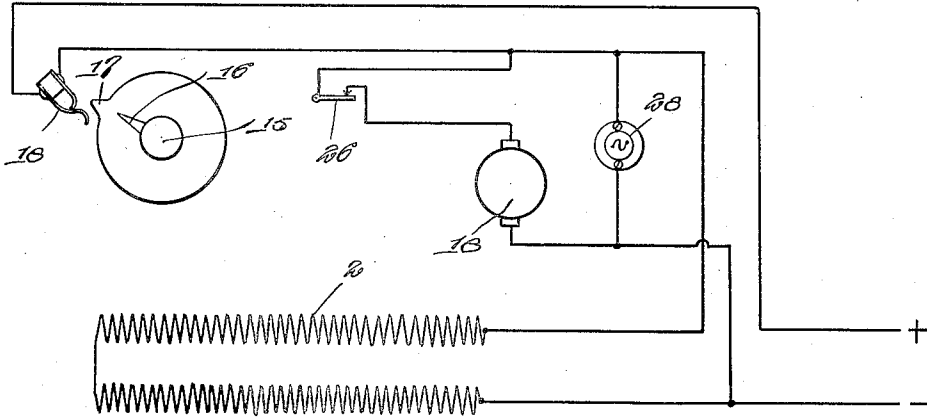


Fig. 4.

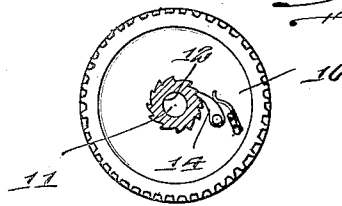


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOSÉ A. OCA-BALDA, OF NEW YORK, N. Y.

ELECTRIC IRON.

1,366,480.

Specification of Letters Patent. Patented Jan. 25, 1921.

Application filed October 7, 1919. Serial No. 329,028.

To all whom it may concern:

Be it known that I, JOSÉ A. OCA-BALDA, a citizen of Argentina, residing at New York city, in the county of New York and State of New York, have invented new and useful Improvements in Electric Irons, of which the following is a specification.

This invention relates to current controlling devices for electrically heating irons and the like and the principal object of the invention is to provide an electrically operated device and actuating means for breaking the circuit to the iron after a predetermined period of time.

This invention covers the use of an electrical motor for actuating the circuit controlling means of the iron, such means being illustrated and described in an application filed by me in the United States Patent Office, Serial No. 314,661. In the present invention the motor takes the place of the clock mechanism shown in the former application.

This invention also includes the means for rendering the mechanism inactive, the means for adjusting the time at which the current will be broken, the means for rendering the mechanism inactive while the iron is being used but permitting the mechanism to break the circuit when the iron is left without turning off the current and means for indicating the condition of the circuit.

The invention is illustrated in the accompanying drawings in which:—

Figure 1 is an elevation partly in section.

Fig. 2 is a plan view partly in section.

Fig. 3 is a diagrammatic view of the circuit.

Figs. 4 and 5 are detail views.

In these views 1 indicates the body of the iron in which is located the heating element or coils 2. 3 indicates the handle of the iron which has pivoted thereto the lever 4 which is normally held in raised position above the handle by the spring 5. The lever 4 has attached thereto a rod 6 the lower end of which is free and is adapted to engage with either the socket 7 or the cylinder 8 which are carried by the casing 9 which incloses the mechanism for controlling the circuit and which is located on the top of the body of the iron.

This mechanism includes a rotatably mounted gear wheel 10, the upwardly projecting lug 11 of which enters a socket 12 formed on the lower face of a wheel 13. The outer wall of the socket 12 is provided with

teeth and these teeth are engaged by a dog 14 carried by the wheel 10 so that a rotation of the wheel 10 will cause the wheel 13 to rotate by means of said dog while permitting the said wheel 13 to be adjusted by means of its handle 15 which projects through an opening in the case 9. This handle carries an arrow 16 which coöperates with the indicia located on the top of the case 9. The wheel 13 is provided with a cam 17 which is in alinement with the arrow 16 and this cam is adapted to engage a switch 18 which controls the supply of current to the heating elements 2 of the iron. When this switch is struck by the cam the circuit will be broken. By adjusting the wheel 13 the cam may be set to break the circuit at any desired time.

The wheel 10 is driven by an electric motor 19 which is located in any suitable manner upon the body 1 and the shaft of this motor drives a shaft 20 by means of the gear 21. The shaft 20 carries a worm 21' and this worm engages a worm wheel 22 which in turn drives a shaft 23 by means of the gears 24. The shaft 23 is provided with a worm 25 which engages the wheel 10. In this way when the motor is actuating its movement will be transmitted to the wheel 10 so as to rotate the same and thus drive the wheel 13.

As shown in the diagrammatic view the motor 18 is connected in parallel with the circuit of the iron and in such a manner that when the switch 18 is in inoperative position the current to the motor will be cut off. The circuit to the motor is provided with a switch 26 which is located in the cylinder 8 and is normally held closed by the spring 27 in said cylinder but when the rod 6 is placed in said cylinder and the lever 4 depressed said switch will be opened and the circuit to the motor broken though the circuit to the heating elements will be closed if the switch 18 is not opened. I may also place a small lamp plate 28 in the circuit to indicate the condition of the same as described in the other applications. Of course this detector may take other forms than the pilot lamp.

It will thus be seen that the handle 15 may be actuated to set the arrow 16 and the cam 21 at the time in which it is desired to break the circuit. The rod 6 is then placed in the socket 7 so that when the handle is grasped by the hand and the lever 4 lowered said rod will not operate the switch 26. Then when the current is turned on the motor will begin

to operate so that after the elapse of the number of minutes for which the device is set the cam will strike the switch 18 and thus break the circuit to both the heating elements and to the motor.

If it is desired to use the iron with the current passing through the heating elements continuously the rod 6 is placed in the cylinder 8 so that the motor is disconnected from the circuit. In this case if the iron should be left without turning the switch the lifting of the hand off the handle would permit the lever 4 to raise so that the spring 27 would close the switch 26 and thus the current would flow to the motor. The motor would then start to actuate and after a predetermined time the cam would strike the switch 18 and thus break the circuit.

If for any reason it is desired to hold the lever 4 in lowered position I may provide a latch 29 on the handle for engaging the end of the lever to lock the same in lowered position.

It will be seen that this invention is similar to that shown in the before mentioned application with the exception that the clock mechanism is replaced by the electric motor.

It will be understood that the means connecting the motor with wheel 10 are so proportioned as to give said wheel the speed desired.

In this invention the use of the motor eliminates the necessity of winding up the clock mechanism used in the other application.

The parts, of course, are of small dimensions and are so arranged that they can be easily removed for the purpose of cleaning or repairing the same.

What I claim is:—

1. The combination with an electric iron and its circuit, of electro-mechanical means for breaking the circuit after an elapse of time, means for regulating this elapse of time and means for rendering the mechanism inactive.

2. The combination with an electric iron and its circuit, of electro-mechanical means for breaking the circuit after an elapse of time, means for regulating this elapse of

time and means for rendering the mechanism inactive while the iron is being used but active when the iron is released.

3. The combination with an electric iron and its circuit, of means for breaking the circuit after an elapse of time, means for regulating this elapse of time, means for rendering the mechanism inactive with the current passing to the heating elements while the iron is being used but active when the iron is released and means associated with the before mentioned means for breaking the circuit when the iron is released at any desired time.

4. The combination with an electric iron and its circuit, of means for breaking the circuit after a predetermined elapse of time, means for setting such means to operate at any desired time, means for indicating the condition of the circuit and electric means for operating the circuit breaking means.

5. The combination with an electric iron and its circuit, of means for breaking the circuit after a predetermined elapse of time and means for rendering the mechanism active and inactive, said means comprising a lever connected with the handle of the iron, a bar actuated by said lever and means controlled by the bar for controlling the circuit to the circuit controlling means.

6. The combination with an electric iron and its circuit, means for breaking the circuit after a predetermined elapse of time comprising a motor, a circuit breaking wheel, means for operating said wheel from the motor, a movable part on the handle of the iron actuated by the hand when the iron is in use and means operated by the actuation of said part for breaking the circuit to the motor.

7. The combination with an electric iron and its circuit, of a circuit breaking wheel, a motor for actuating the wheel, means permitting the wheel to be actuated by hand, a movable part on the handle adapted to be depressed by the hand when the iron is being used and means actuated by the depression of the part for breaking the circuit to the motor.

In testimony whereof I affix my signature.

JOSÉ A. OCA-BALDA.