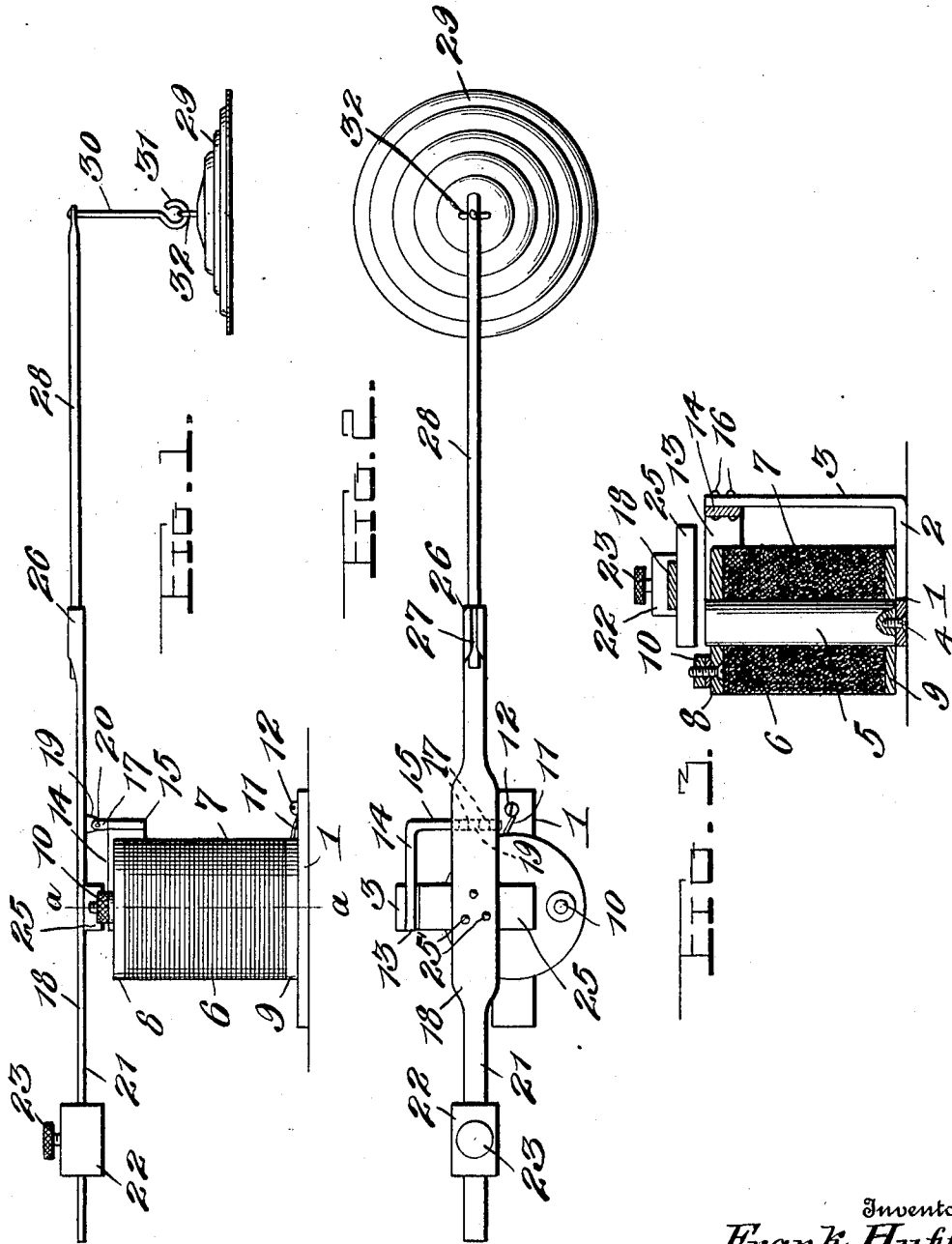


F. HUFF.
ELECTRIC DAMPER CONTROL.
APPLICATION FILED DEC. 7, 1910.

1,020,606.

Patented Mar. 19, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK HUFF, OF NAPA, CALIFORNIA.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK HUFF, a citizen of the United States, residing at Napa, in the county of Napa and State of California, have invented certain new and useful Improvements in Electric Damper Controls, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improved electric damper control for use in incubators and consists in the construction, combination and arrangement of devices, hereinafter described and claimed.

In the accompanying drawings: Figure 1 is a side elevation of an electric damper control constructed in accordance with my invention. Fig. 2 is a plan of the same. Fig. 3 is a detail transverse sectional view of the same on the plane indicated by the line *a-a* of Fig. 1.

In accordance with my invention, I provide a base 1 which is preferably made of wrought iron, which is of suitable size and shape, and which is provided at one side with a laterally extending arm 2 at the outer end of which is a vertical standard 3, the base, the said arm and the said standard being here shown as integral. To the center of the base is secured, as by means of a screw 4, the lower end of the core 5 of an electromagnet 6, the windings of which are indicated at 7, and the heads at 8, 9. The upper head 9 is provided with a binding post 10 to which an electric conducting wire may be connected, the other terminal of the windings being indicated at 11, and engaged by a screw 12 which is also employed to secure the base on a suitable support. A horizontally disposed bracket 13, which comprises arms 14, 15, arranged at right angles to each other, has its said arm 14, secured to the inner side of the standard 3, as at 16, so that the arm 15 is disposed above and at right angles to the base. The said arm 15 is provided on its upper side with a pair of lugs 17 appropriately spaced apart, and provided with alining openings.

A balancing beam 18 which is preferably made of sheet brass is provided on its under side at a suitable point with a lug 19 which enters the space between the lugs 17 and is pivoted thereto by means of a pin 20, which passes through alining openings in said lugs 17, 19. The said balancing beam is provided at one end with an arm 21 on

which is fitted a weight 22 which is slidable thereon, the said weight having an opening through which the said arm extends, and the said weight is provided with a set screw 23 whereby it may be secured to the said arm at any desired adjustment. On the under side of the balancing beam, at a point immediately above the upper pole of the core 5, is an armature 25 which is secured to the balancing beam, as by means of screws 25'. The balancing beam at the end opposite the arm 21 thereof is bent on opposite sides to form a tubular socket 26 which is open on its upper side as at 27, an extension arm 28 which may in practice be a piece of wire of suitable gage, of brass or aluminum having its inner end fitted in the said socket, and hence secured to the balancing beam and forming a part thereof. A damper 29 here shown as a sheet metal disk for regulating the draft of a lamp or other heating device for heating an incubator is suspended from the extension arm 28 by means of a link 30, the said link having a hook 31 at its lower end which engages an eye 32 on the center of the said damper.

Assuming that the device has been properly adjusted it will be understood that the damper disk by gravity will be normally held at a suitable point, and that the same will act upon the balancing beam to cause the latter to space the armature from the pole of the electro-magnet. In practice a suitable thermostatically operating electric circuit closer will be used to control the circuit including the windings of the electro-magnet and when the said circuit is closed, the electromagnet will become excited and by acting upon the armature will cause the latter to partly turn the balancing beam on its pivot and hence cause the balancing beam to raise the damper disk. As soon as the desired change in temperature has taken place, the circuit by the action of the thermostatically operating circuit closer will be opened, and hence the damper disk by gravity will reassume its normal position, so that the operation of the device is automatic.

I claim:

The herein described electric damper controlling mechanism embodying a base having a vertical standard rising therefrom at one side, an electromagnet having the lower end of its core secured on the base, a horizontally disposed bracket comprising a pair of arms arranged at right angles to each

other, one arm of the said bracket being secured to the upper end of the standard and the other arm thereof being disposed at one side of the electromagnet, a balancing beam
5 pivotally mounted on the last mentioned arm of the bracket, said balancing beam being provided with an armature and also with a pair of oppositely extending arms, a damper device suspended and carried by one

arm of the balancing beam and a shiftable 10 weight carried by the other.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FRANK HUFF.

Witnesses:

T. N. MOUNT,
ELIZABETH GRIGSBY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."