

A. F. JACOBSON.

ELECTRIC HEATER.

APPLICATION FILED AUG. 6, 1910.

1,007,446.

Patented Oct. 31, 1911.

Fig. 2

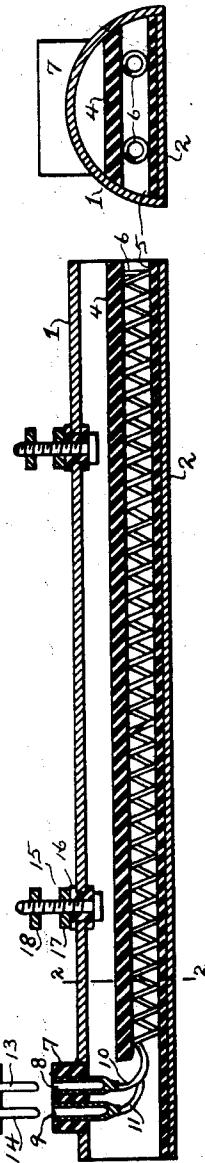


Fig. 1

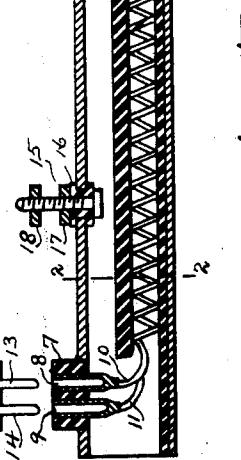


Fig. 3

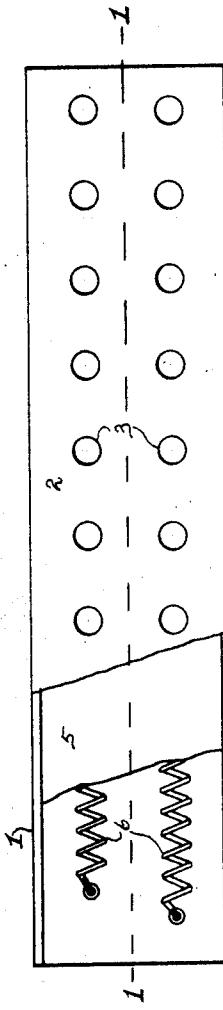


Fig. 4

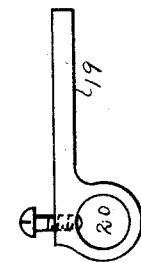
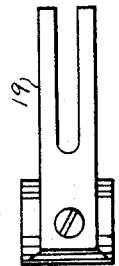


Fig. 5



WITNESSES

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ELECTRIC HEATER.

1,007,446.

Specification of Letters Patent. Patented Oct. 31, 1911.

Application filed August 6, 1910. Serial No. 575,872.

To all whom it may concern:

Be it known that I, ALLAN F. JACOBSON, a citizen of the United States, resident of the borough of Richmond, city and State of New York, have invented certain new and useful Improvements in Electric Heaters, of which the following is a specification:

The heater that is the result of my invention is particularly designed and well fitted for an especial purpose, and my experiments have demonstrated that it performs well the particular duties for which it was originated.

In feeding a printing press by hand, or even by mechanical means from piled up sheets of paper cut to uniform size, it is found that they adhere in a most annoying manner even though they are perfectly dry. This adhesion, it is found, is due to the presence of a certain amount of static electricity in the paper due to the friction of drawing one sheet after another from the pile, or to the slight friction between the sheet and the plate while the printing is being done. The result of its presence is that it becomes particularly difficult to feed a single sheet at a time, and in addition, the freshly applied ink upon the surface of the sheet will backset making it necessary to insert a plain unprinted sheet between each two printed sheets. My heater in addition to removing the static electricity also thoroughly dries the surface of the paper, preventing the formation of static electricity during printing, and makes it well fitted to receive and retain the ink.

The following is what I consider the best means of carrying out this invention.

The accompanying drawings form a part of this specification, in which:

Figure 1, is a horizontal section of the heater on the line 1—1 of Fig. 3. Fig. 2, is a transverse section. Fig. 3, is a plan, the fracture disclosing to view the insulating lining and the location of the coils. Fig. 4, shows in side elevation, a bracket for securing my device in place. Fig. 5, is a plan view of the bracket.

Similar reference numerals indicate like parts in all the figures where they appear.

Referring to the figures, a metallic casing is shown comprising the semi-cylindrical upper part 1 and the flat perforated bottom plate 2. These may be of brass or copper or other light metal but because of the duties they are called upon to perform

I prefer that they be of a metal having a high conductivity and have therefore in my experiments used sheet copper. The bottom plate 2 is provided with a series of perforation corresponding to each coil in my heater and as I have shown a heater having two heating coils in series, I have therefore shown two series of holes as indicated by 3. These holes are important in allowing for a free circulation of air through the heater particularly in the simpler construction of my device wherein the sheet of insulating material 5 is dispensed with. The interior of my semi-cylindrical member is nearly completely lined with asbestos; the sheet 4 resting well up in the arch is nearly as long as the whole casing, and the sheet 5 resting on the plate 2 is quite as long and as wide as that plate. Between the asbestos sheets 4 and 5 the coils 6 are placed. I use two coils in series, they are wound on a small diameter, say about $\frac{1}{4}$ inch, mandrel and are of wire having a high resistance and an ability to withstand a high temperature continuously. In addition to this the wire should be capable of numerous heatings and subsequent coolings without deterioration. These coils are nearly as long as the casing and lie longitudinally therein. Near one end, the left end in the figures, I have shown a connecting block 7. This block is of hard fiber or rubber and is provided with two sockets 8 and 9 to the bottoms of which the ends 10 and 11 of the coil 6 are secured. A plug 12 which may also be of fiber has outwardly extending points 13 and 14 of a diameter just sufficient to fit snugly into the sockets 8 and 9. To the upper end of the plugs 13 and 14 line wires from any convenient source of electric power are secured, and it is through these that the energy is received for heating, by their own resistance, the coils 6. At 15 I have shown lugs secured in the top of the casing 1 but electrically insulated therefrom by means of the insulating rings 16. A nut 17 secures the lug 15 in place and an additional nut 18 serves as a convenient means for securing the whole device in a desired location.

I have found that in locating my device for best operation certain lateral adjustment is necessary. I have therefore designed a bracket 19 to allow for that adjustment. This bracket is by means of the hole 20 strung upon a convenient rod or bar and the lug 15 is then secured to the forked end

of the bracket 19, one of the brackets being provided for each of the lugs 15.

Modifications may be made within the scope of the appended claims without departing from the principle or sacrificing the advantages of this invention. A greater or less number of coils may be used in the heater if it is found desirable. The number of lugs 15 may be varied. I have shown 10 perforations 3 in the plate 2; these may be omitted and the device work well but I prefer the whole as shown.

Having carefully and fully described my invention what I claim and desire to secure 15 by Letters Patent is:

1. The combination with a printing machine of a semi-cylindrical shell extending across in close proximity to a part thereof, parallel coils extending longitudinally with- 20 in said shell and an insulating plate carried by the shell below the resistance coils.

2. In a device of the character described, a semi-cylindrical shell, parallel resistance coils extending longitudinally within said shell and a series of insulated lugs secured 25 within said shell for suspending said shell in operable position.

3. The combination with a printing machine, of a semi-cylindrical shell extending across in close proximity to a part thereof, parallel resistance coils extending longitudinally within said shell, an insulating plate carried by the shell below the resistance coils and a metallic plate outside of said insulating plate as specified. 30

Signed at the city of New York, N. Y. this 30th day of June 1910 A. D. in the presence of two witnesses.

A. F. JACOBSON.

Witnesses:

G. E. STERRITTE,
ARTHUR PHELPS MARR.