No. 735,182. PATENTED AUG. 4, 1903.

D. M. WATSON.

ELECTRIC HEATING APPARATUS.

APPLICATION FILED AUG. 19, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

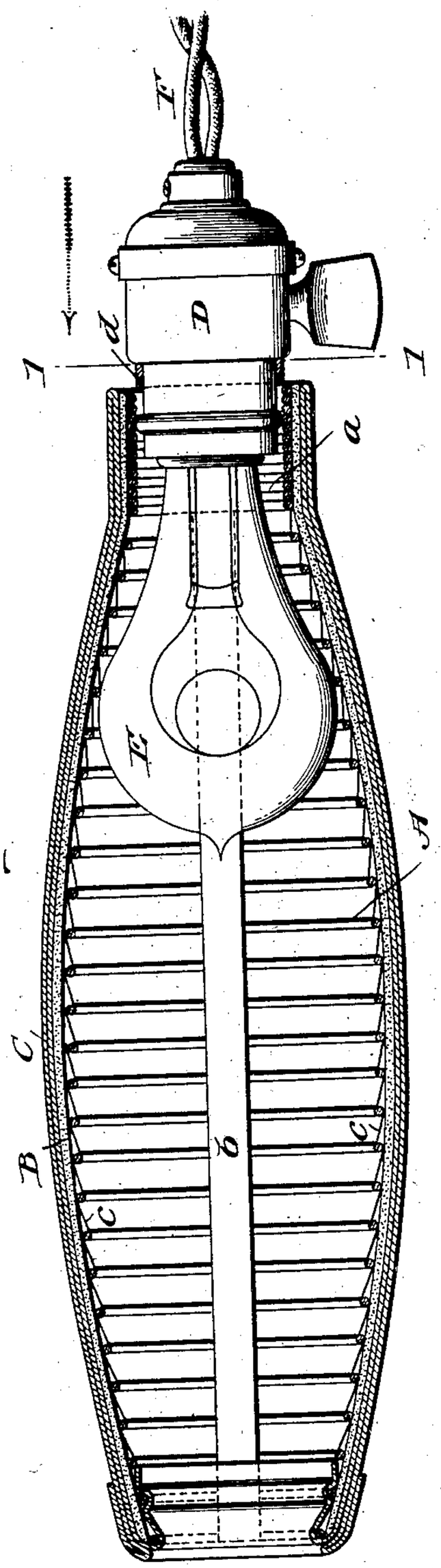


Fig. 3.

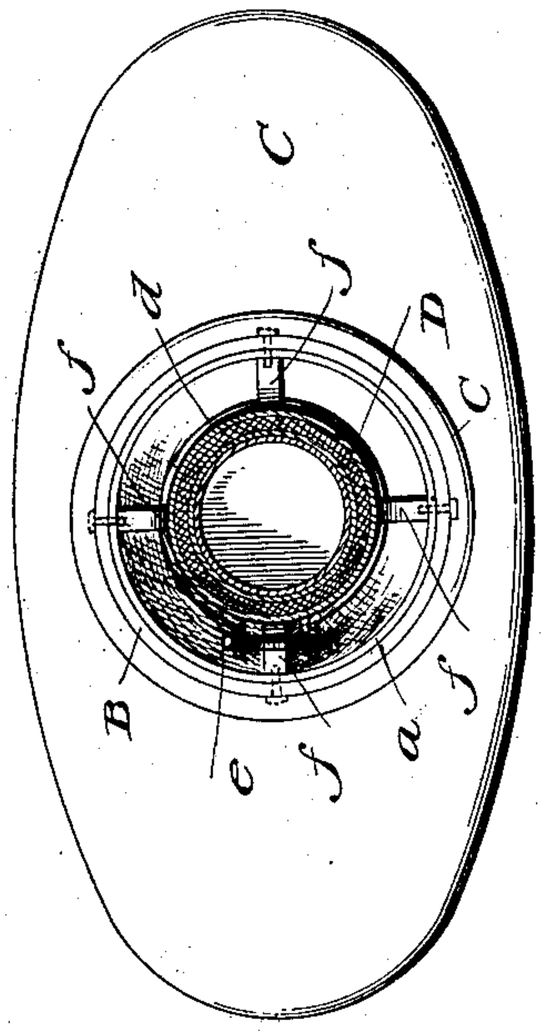
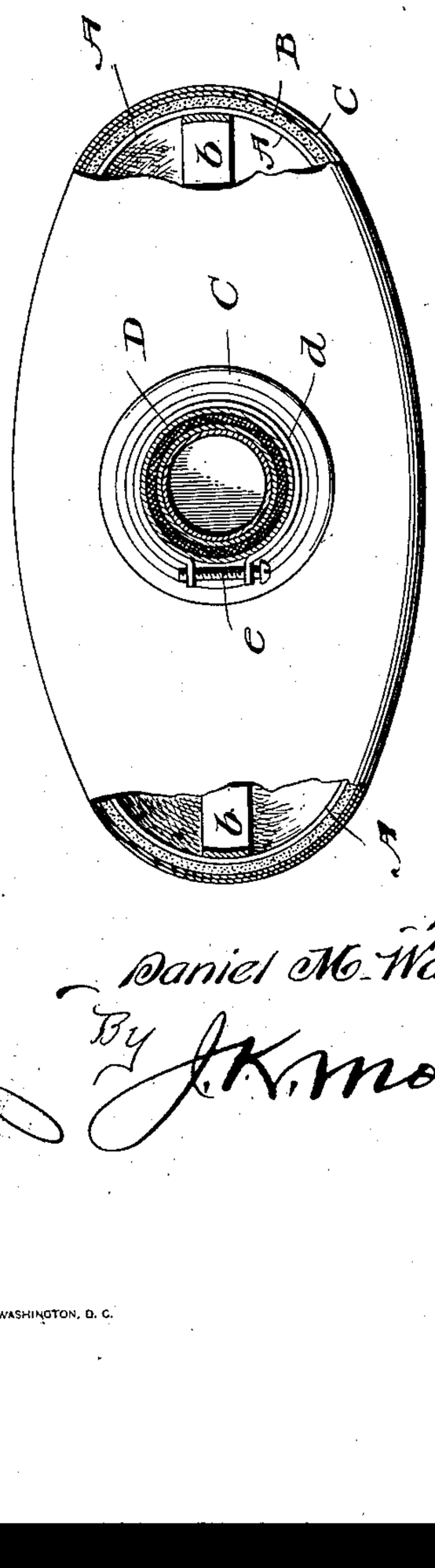


Fig. 2.



Witnesses—

W. C. Dodd

H. C. Benjamin.

Inventor—

Daniel M. Watson

By J. K. Mock

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NO MODEL. 2 SHEETS—SHEET 2.

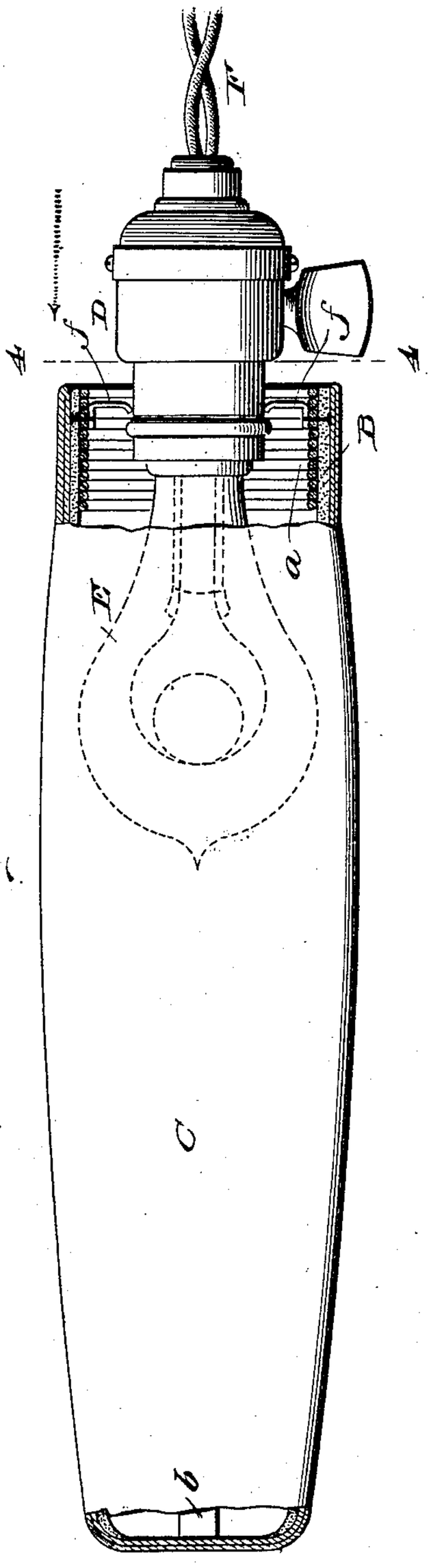

Fig. 4.

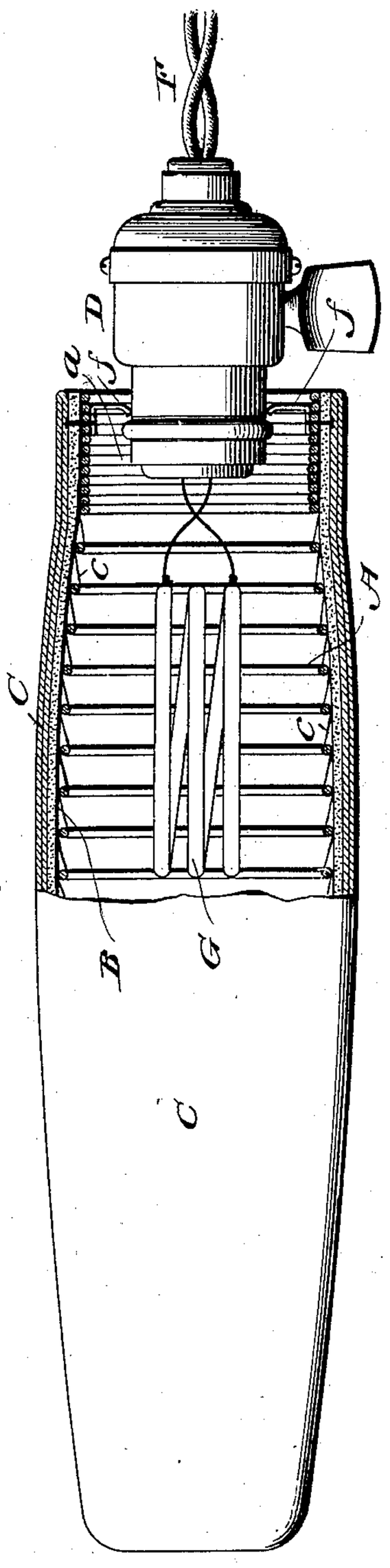

Fig. 5.

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No. 735,182. Patented August 4, 1903.

UNITED STATES PATENT OFFICE.

DANIEL M. WATSON, OF PORTLAND, OREGON.

ELECTRIC HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 735,182, dated August 4, 1903.

Application filed August 19, 1902. Serial No. 120,243. (No model.)

To all whom it may concern:

Be it known that I, DANIEL M. WATSON, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Electric Heating Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to electric heating apparatus, and is adapted for applying heat locally in the manner usually employed with hot-water bottles.

The object of my invention is to construct a simple yet effective device for employing the heat derived from an incandescent electric lamp or electric coil in the warming of beds or the feet and for similar purposes.

Figure 1 represents a longitudinal section of my improved heater. Fig. 2 is a cross-section on the line 1 1 of Fig. 1, showing the stays *b*. Fig. 3 is a cross-section on the line 4 4 of Fig. 4. Fig. 4 is a modification showing the heater closed at the extremity, with the end to which the lamp is attached open. Fig. 5 represents the same form as shown in Fig. 4, with a coil G employed in place of the incandescent lamp.

In the drawings, A is the framework of my heating-pad, formed of suitable wire. The upper portion is wrapped closely together, as shown at *a*, Fig. 1, and firmly held in position by soldering or otherwise, thus forming a substantial support for the lamp E. With the lower portion open, as in Fig. 1, the end supporting the lamp may be contracted to a size that will just receive the socket of the lamp, the bulb being inserted from the open end, while the body of the pad is expanded, giving room for the bulb to be held free from contact therewith and increasing the surface of the pad. In the body portion the wires are separated so as not to give unnecessary weight, and yet they are sufficiently close for strength. They are held from displacement by the stays *b* at either side and the small wires *c* at equal distances between them. The stays are secured to the wire frame by soldering or in any usual manner. Secured to the top of the contracted portion *a* of the pad is a spring-band *d*, adapted to clasp the neck of the lamp-socket D, which is held firmly by means of the screw *e*. When the lamp is in place, it receives the electric current by means of the conductor F, attached to any suttable line-wire or electric system and may be operated just as an ordinary incandescent light. In the form shown in Figs. 4 and 5 the spring-band *d* is secured to the framework *a* by means of the arms *f*, which are held in place in any usual manner, as shown in Fig. 3. It is essental to form the pad with one end open in order to admit of circulation of air, and thus prevent the pad from becoming too hot.

Secured upon the exterior of the frame A is a covering of asbestos cloth B or similar material, which will prevent the rapid transmission of heat and also prevent injury from burning, while at the same time it prevents the wire frame from coming in contact with the body receiving the heat. Over the asbestos covering I place a final exterior covering C. This I make of a cloth having a smooth surface, and when properly secured gives the pad a neat finish.

The framework is sufficiently strong for the protection of the lamp and for its own preservation, and its resiliency allows of a slight yielding from pressure, so that injury will not result from contact with the pad.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an electric heating apparatus, a receptacle consisting of a wire framework provided with stays and having a flexible covering and having one end open and means attached to said framework for supporting an electric lamp, whereby said lamp is held within said receptacle, substantially as specified.

2. In an electric heating apparatus, a framework consisting of wire coiled to form an oblong receptacle, at one end of which, the coils are firmly secured upon each other, forming a rigid support, the remainder of said coils being separated and held in place by stays; a spring-band adapted to clasp the socket of an incandescent lamp, and means connecting said band and said rigid support whereby said lamp is held within the receptacle, substantially as specified.

3. An electric heating-pad, comprising an

oblong framework formed of wire and having an asbestos covering, means for allowing free circulation of air and means for engaging an electric coil whereby the said coil is held within the pad, substantially as specified.

4. An electric heating-pad, comprising an oblong framework formed of wire and having a covering of cloth, means for allowing free circulation of air, an electric coil, a spring-clasp supporting said electric coil and arms secured to said framework at one end and at the other to said spring-clasp, whereby said coil is held within the pad, substantially as specified.

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

DANIEL M. WATSON.

Witnesses:
H. B. ADAMS,
D. M. DONAUGH.