

(No Model.)

3 Sheets—Sheet 1.

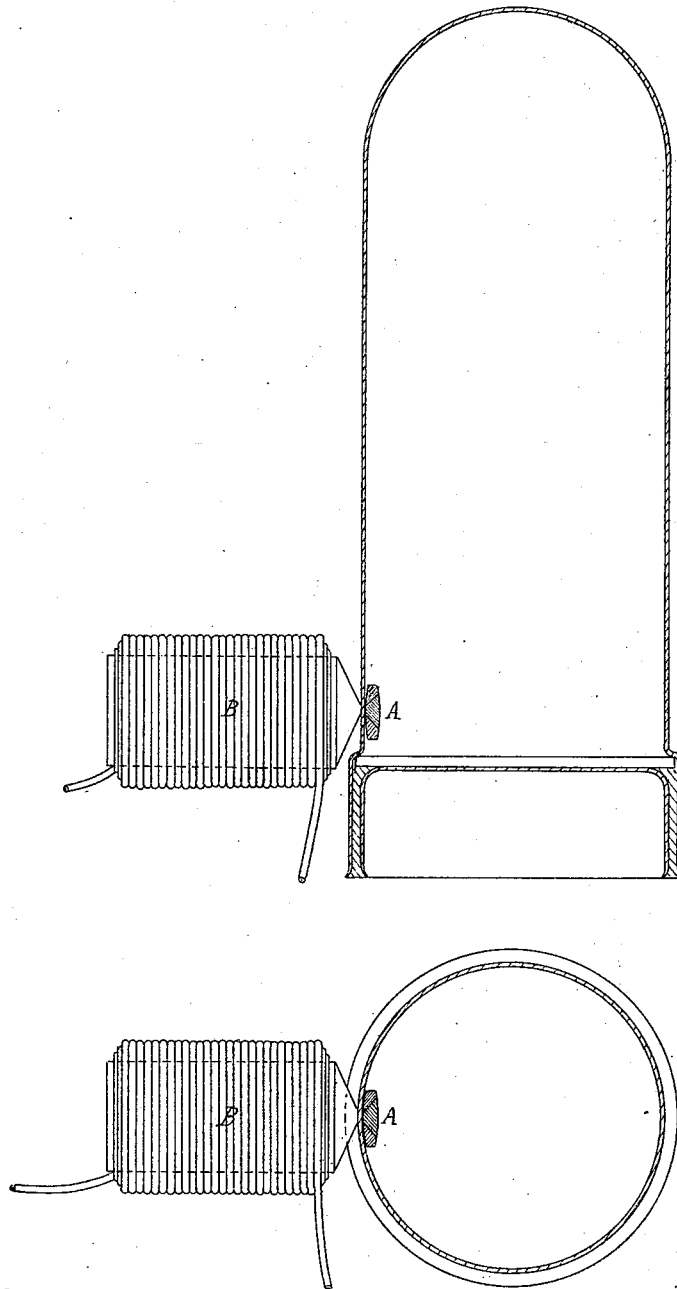
J. JAMESON.

DEVICE FOR CLEANING ELECTRIC LAMP GLOBES.

No. 261,234.

Patented July 18, 1882.

*Fig 1.*



Witnesses.  
R. W. F. Ogilvie  
L. F. McLeherry

Inventor.  
John Jameson  
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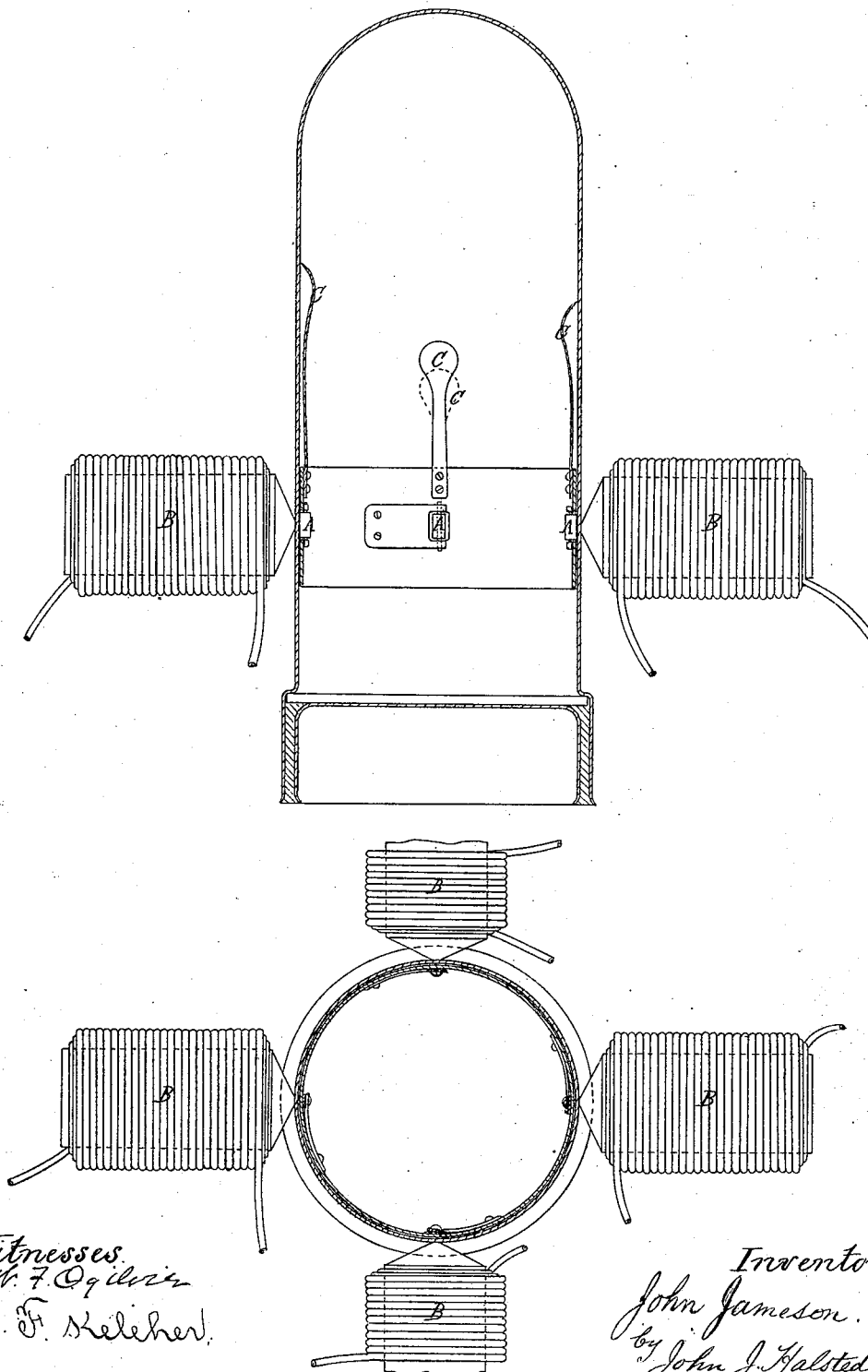
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Fig 2.



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Fig. 3.

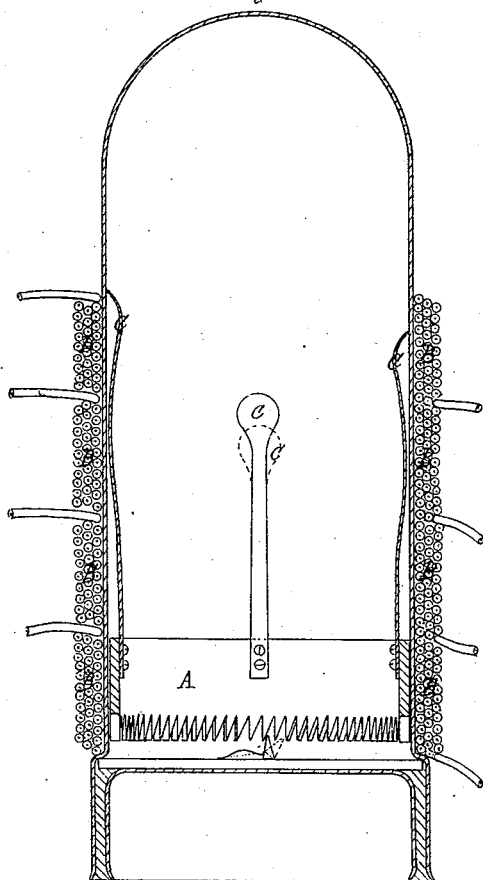
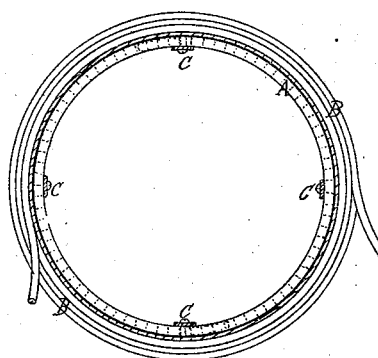
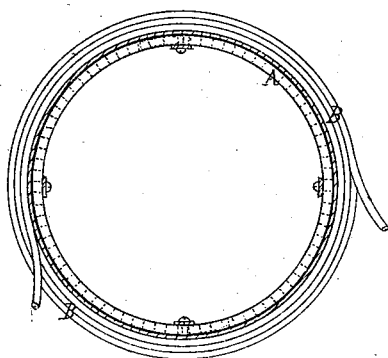
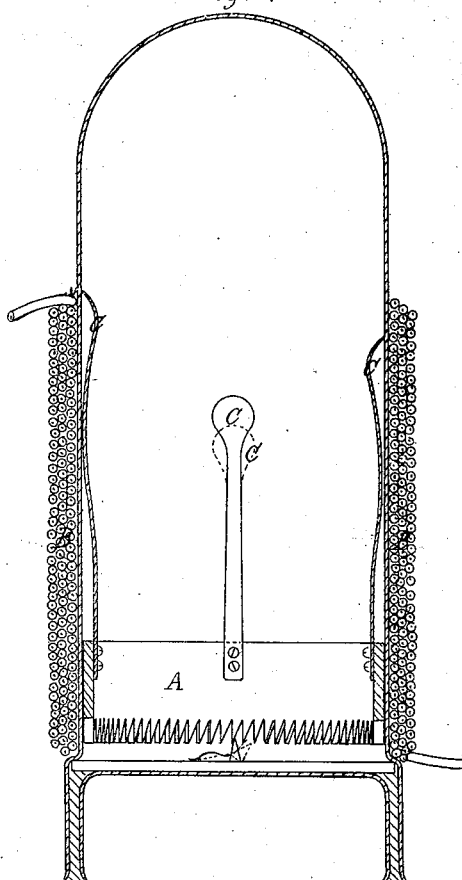


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JOHN JAMESON, OF NEWCASTLE-UPON-TYNE, ENGLAND.

## DEVICE FOR CLEANING ELECTRIC-LAMP GLOBES.

SPECIFICATION forming part of Letters Patent No. 261,234, dated July 18, 1882.

Application filed April 10, 1882. (No model.) Patented in England October 12, 1881, No. 4,439.

*To all whom it may concern:*

Be it known that I, JOHN JAMESON, a subject of the Queen of Great Britain, residing at Newcastle-upon-Tyne, England, have invented a new and useful Device for Cleaning Electric-Lamp Globes, (for which I have obtained a patent in Great Britain, No. 4,439, dated the 12th October, 1881, sealed 17th January, 1882,) of which the following is a specification.

My invention consists in the application of electricity or magnetism whereby to obtain transmission of power to the inside of vacuous electric lamps for the purpose of cleaning the same.

My invention may be operated in various ways, some of which are illustrated in the drawings hereto annexed.

Figure 1, Sheet 1, represents in elevation and section a very simple form of apparatus for the purpose, and consists of A, an iron button or a small packet of iron filings wrapped in a pad of chamois leather or similar material inside the vacuous lamp, with B, a magnet—or, as shown in the drawings, an electro-magnet—outside. If the magnetism of the magnet be sufficient, by the movement of the magnet on the lamp or the lamp relatively to the magnet, the button, by its attraction, may be caused to move over such part of the inside of the lamp as may be desired, and the lamp may be so cleaned. The button may be formed into a brush or set into a rim of wood, so as to prevent its rolling on its edge, and so pointed or sharpened as to act as a scraper.

Fig. 2, Sheet 2, represents another form, in which more than one button or iron armature A may be employed and more than one magnet B. The armatures are shown as rollers, so as to give facility of movement where the attraction is strongest, and are set in a ring of brass, to which is attached one or more pads or brushes or scrapers, C, as shown.

Fig. 3, Sheet 3, represents another form, in which, by means of a series of coils of wire, B, as shown, placed outside the lamp, and the passage of a current or currents of electricity through the same, an iron ring, A, or coil of iron wire within the lamp becomes magnetic, and, if it be not in the position in reference to the external coil which the passage of the electricity tends to give it, there will be an effort produced to assume that position. (It may be prevented from occupying this neutral posi-

tion, apart from the passage of electricity through the external coil, by means of springs, so as that the passage of electricity, if adequate, will produce movement, this movement being made to operate the pads, brushes, or scrapers.) The external coils may be fixed relatively to the lamp, and by a commutator arrangement electricity may be imparted to the coils in succession, so as to produce a long stroke of the ring without undue length of ring and coil. To this ring the pads, brushes, or scrapers are attached, or, as in Fig. 4, Sheet 3, one coil only may be employed outside the lamp, and the lamp may be slipped in this coil up and down, so as to obtain the effect due to more or less perfectly fixing the ring with its pads, brushes, or scrapers while the lamp is moved.

I have shown in the drawings arrangements for producing rectilinear motion of the ring lengthwise of the lamp. The motion may, however, be rotary by slight modification, as will be well understood. If it be longitudinal, as shown, however, I provide for a slow rotation by means of a circular rack arrangement or equivalent device, (shown in Fig. 3,) with a pawl or pair of pawls, which, on completion of each stroke, rotates the ring, with its attached cleaners, to the extent of one tooth. The arrangement may be modified by the introduction within the lamp of any form of electrodynamic machine, and there are various other forms for the transmission of electricity or magnetism so as to produce motion, and thus to operate a cleaning device. I do not, however, claim any particular form of mere mechanism; but

What I claim as my invention is—

In a vacuous electric lamp, a cleaning pad, brush, or scraper within its glass or light-transmitting portion, serving as or actuated by an armature, and adapted to be moved over the interior surface of the said glass, in combination with a magnetic or electro-magnetic apparatus serving to operate the cleaning device without access to the interior of the lamp.

JOHN JAMESON.

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