

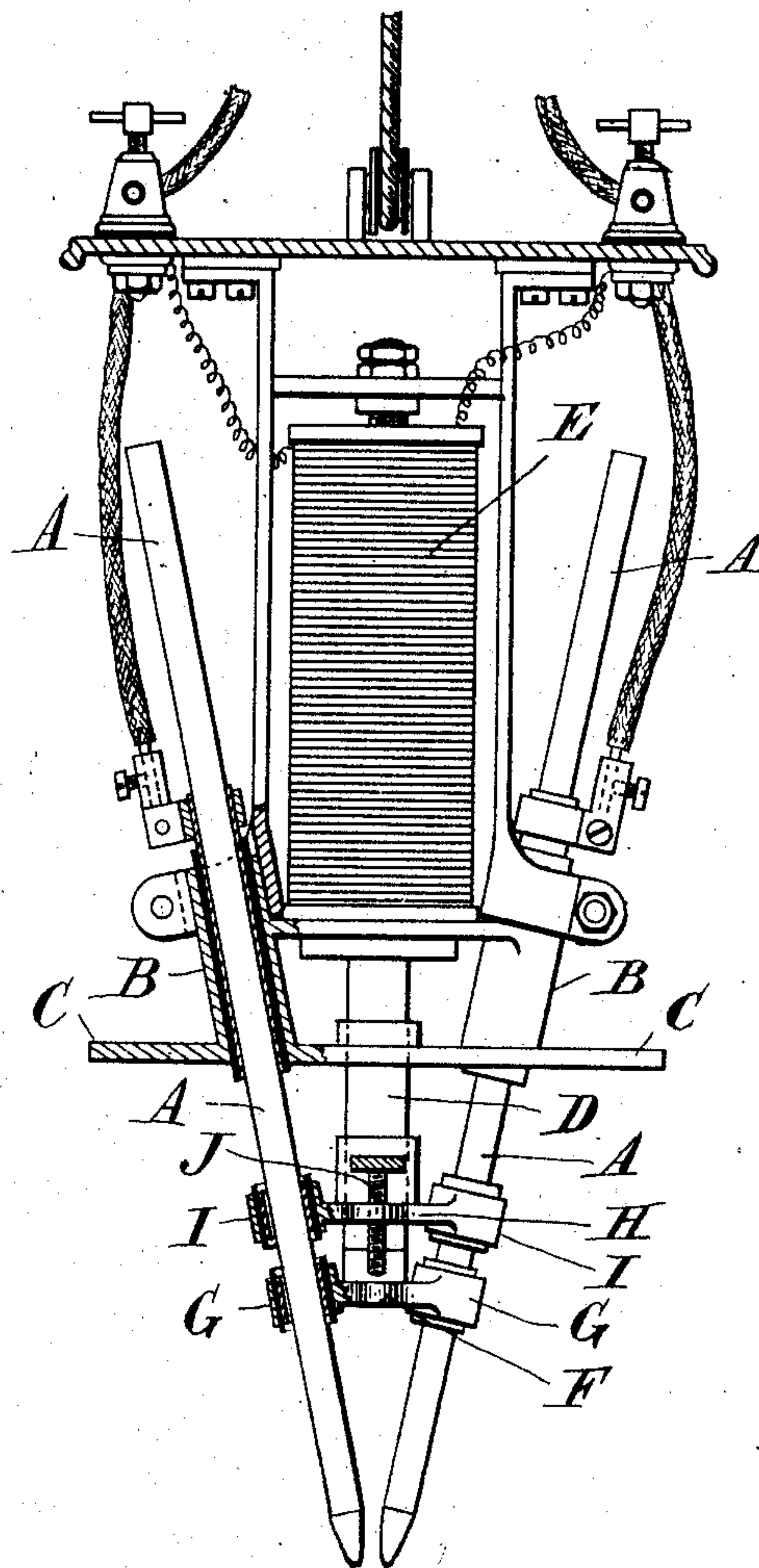
No. 881,015.

PATENTED MAR. 3, 1908.

L. C. H. MENSING.  
ELECTRIC ARC LAMP.  
APPLICATION FILED FEB. 9, 1905.

2 SHEETS—SHEET 1.

*Fig. 1.*



Witnesses  
*Charles W. Shindler and*  
*James L. Norris, Jr.*

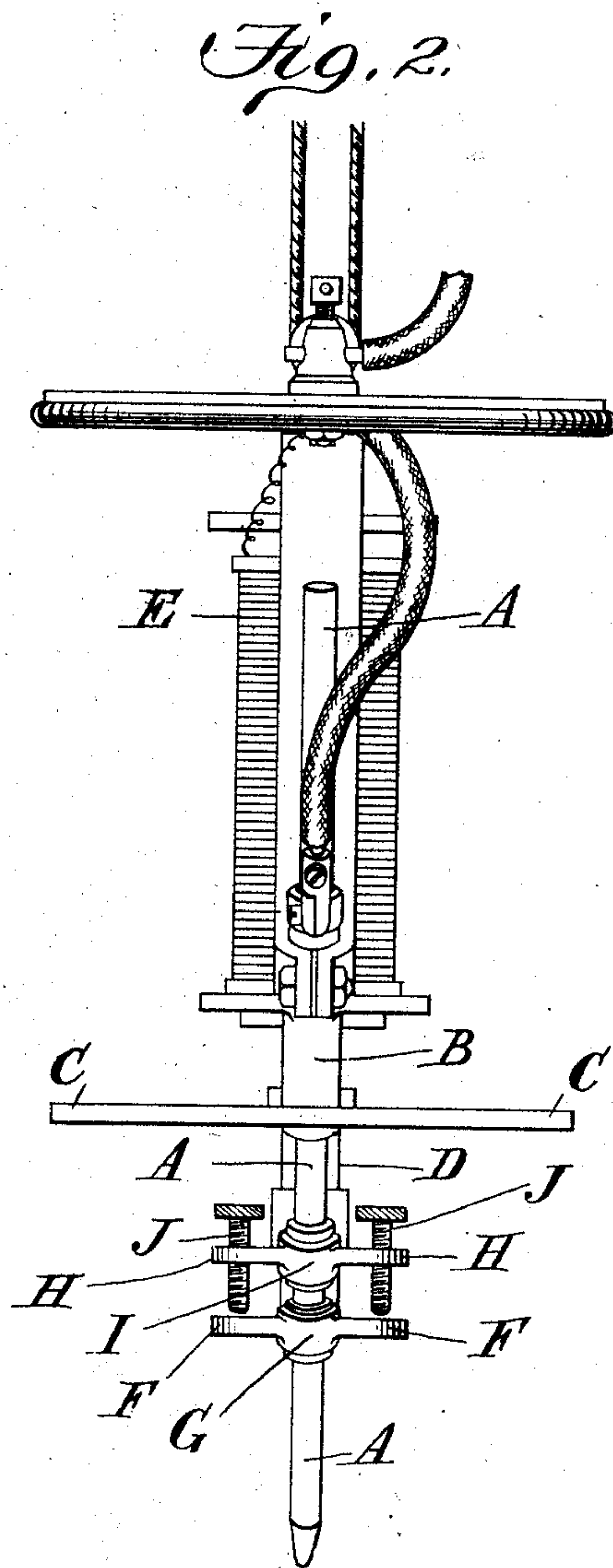
Inventor  
*Louis Carl Henry Mensing*  
By *James L. Norris*  
Atty.

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2 SHEETS—SHEET 2.



Witnesses:  
Dennis Sully.  
C. D. Hester

Inventor  
Louis C. H. Mensing  
By James L. Norris  
Att'y



# UNITED STATES PATENT OFFICE.

LOUIS CARL HENRY MENSING, OF RUGBY, ENGLAND.

## ELECTRIC-ARC LAMP.

No. 881,015.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed February 9, 1905. Serial No. 244,943.

*To all whom it may concern:*

Be it known that I, LOUIS CARL HENRY MENSING, subject of the King of Great Britain, residing at 33 Clifton road, Rugby, Warwickshire, England, have invented certain new and useful Improvements in Electric-Arc Lamps, of which the following is a specification.

This invention relates to electric arc lamps; and the object thereof is to construct, in a manner as hereinafter set forth, the feed mechanism of the lamp, whether of the open or closed type, so that the feed shall be affected by the magnet direct without the intervention of levers or gears of any kind.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts hereinafter more specifically described and illustrated in the accompanying drawings wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the accompanying drawings, wherein like reference characters denote corresponding parts throughout the several views,—Figure 1 is a view in sectional elevation illustrating a lamp provided with a carbon-feeding mechanism in accordance with this invention, and, Fig. 2 is a side elevation.

Referring to the drawings in detail, A A denote the carbons which are arranged at an angle with respect to each other. The carbons A A are capable of a free movement in tubes B B affixed to and insulated from the base C or another part of the lamp.

The reference character E denotes a solenoid, the core D of which carries a bridge or plate F provided with short insulated tubes G G which extend at the same angle or nearly so with respect to the carbon tubes B B. The said tubes G G are adapted to engage the carbons A A near their meeting points. Above the bridge F and surrounding the core D is a bridge or plate H provided with short insulated tubes I I which are arranged at the same angle as the carbon tubes B B. The bridges F H are separated from each other and move in a vertical line so that the tubes G G and I I of the bridges are not in co-axial line with the carbon tubes B B, whereby the walls of the tubes G G and I I grip the carbons A A and retain them in position.

The loose bridge H is provided with set screws J J which are adapted to be engaged by the bridge F. As the carbon points turn away, increasing the length of the arc gap, the resistance to the passage of the current at this point is increased, and more current will pass to the solenoid augmenting its power, and causing the core D to be drawn upward. In this action the bridge F is raised by the core D and its holes will be brought into alinement with the bores of the tubes B B, thus relieving the clutch of the bridge F, but not affecting the grip of the loose bridge H until the bridge F is raised high enough to come in contact with and lift the set-screws J J when the loose bridge will be raised also and its holes brought into alinement with the bores of the tubes B B. The carbons are thereby released and feed downward together. As the carbon points approach, the resistance to the passage of the current decreases and the solenoid is proportionately demagnetized. The core D now descends carrying with it the bridge F, which then no longer supports the set-screws J J so that the loose bridge H also descends, the effect being that the carbons are again gripped and held. The wedging action of the bridge F on the carbons causes their points to be separated and thus the arc is struck. The carbons are loosely mounted in the holders, this being sufficient in practice to provide the required separating distance for striking the arc.

What I claim and desire to secure by Letters Patent is:—

1. In an electric arc lamp, a pair of inclined carbon tubes, a solenoid, a bridge F carried by the core of said solenoid and having inclined sleeves normally out of axial alinement with said tubes and adapted to be brought into such alinement by the rise of the core, a bridge H movable independently of said core and having inclined sleeves, an adjustable contact carried by said bridge H and adapted to be engaged by the bridge F in the inward movement of the core, carbon points adapted to be inserted in said carbon tubes and through the respective sleeves of said bridges in a manner to have their points come substantially in contact, the combination operating as described.

2. In an electric arc lamp a pair of inclined carbon tubes, a solenoid, a bridge carried by the core of said solenoid and having

inclined sleeves normally out of axial alignment with said tubes and adapted to be brought into such alinement by the rise of the core, means independent of the core and  
5 adapted to be engaged by the bridge on the inward movement of the core, and carbon points adapted to be inserted in said carbon tubes, extend through the sleeves of the bridge and engaged by said means, said

means when engaged by said bridge releasing 10 the carbons to allow the feed thereof.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS CARL HENRY MENSING.

Witnesses:

PERCY E. MATTOCKS,  
FRED. C. SMITH.