

No. 760,361.

PATENTED MAY 17, 1904.

L. WOLFF.
STEADYING RESISTANCE FOR ARC LAMPS.

APPLICATION FILED DEC. 16, 1903.

NO MODEL.

Fig. 2.

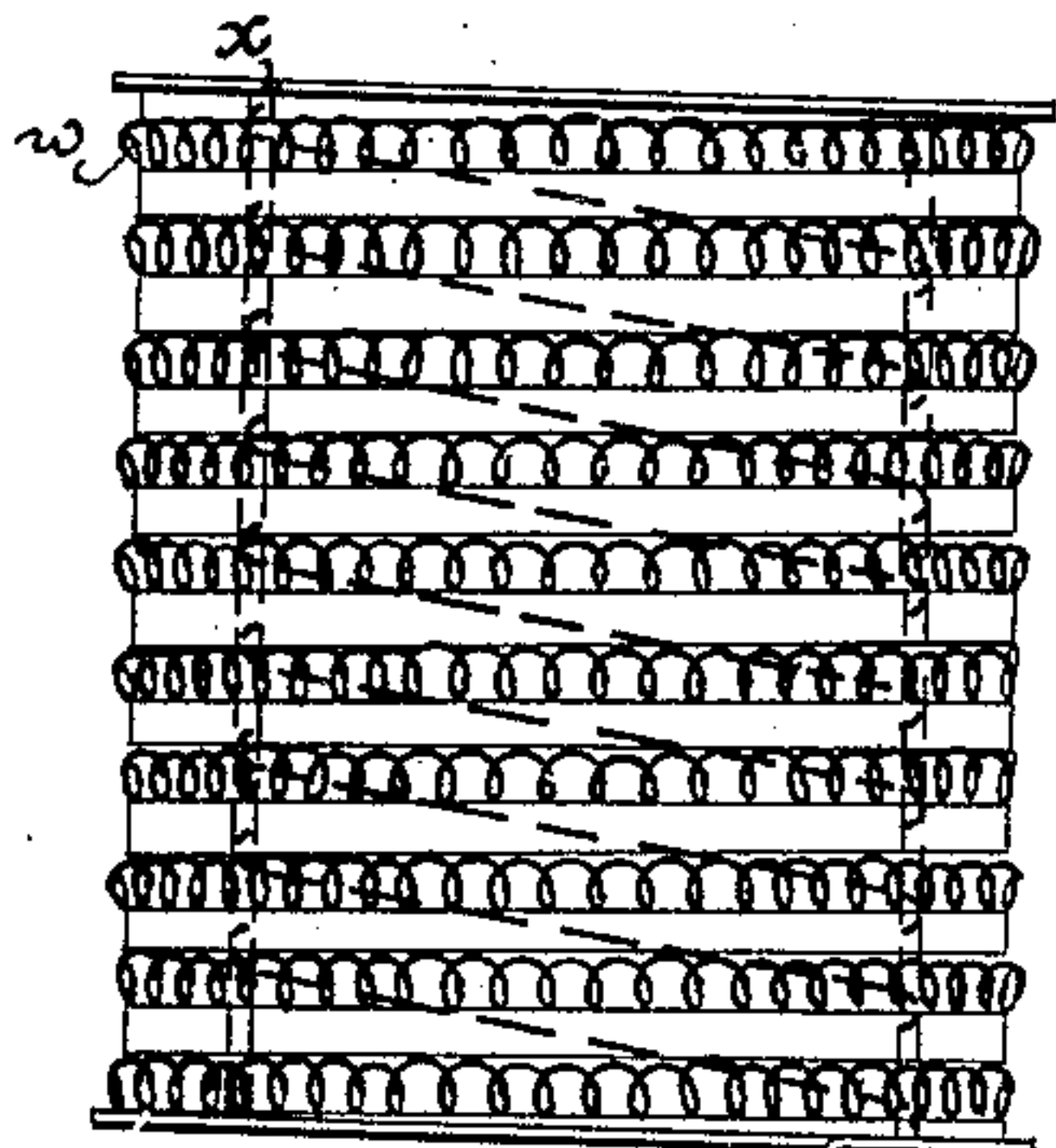
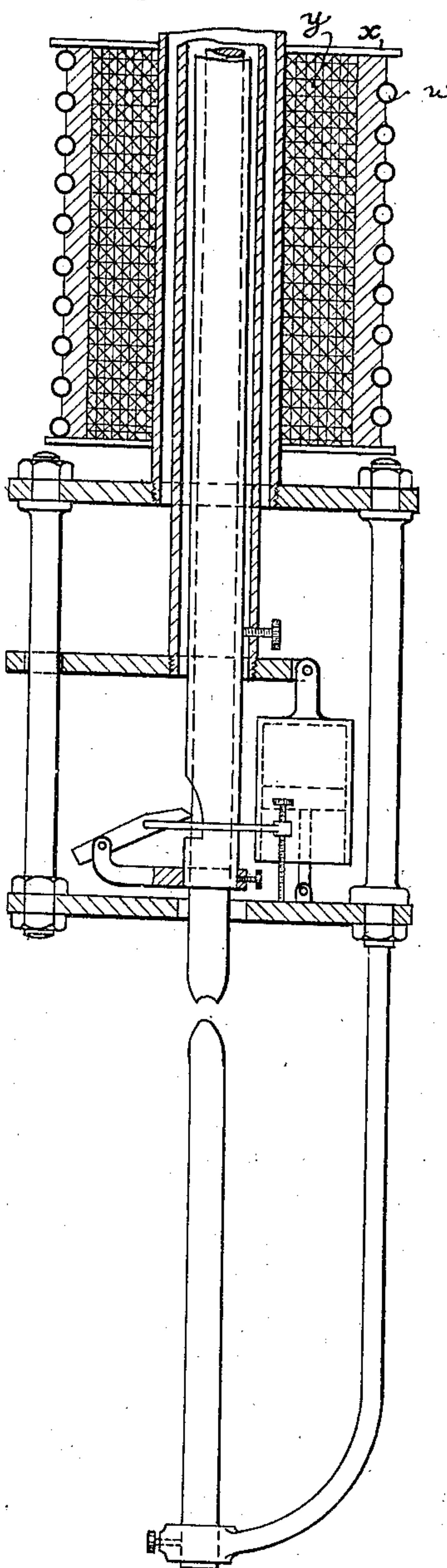


Fig. 1.



Witnesses:

J. C. P. Powell
Walter Allen

Inventor.

Louis Wolff
by Herbert W. Jenner.
Attorney.

UNITED STATES PATENT OFFICE.

LOUIS WOLFF, OF BERLIN, GERMANY.

STEADYING RESISTANCE FOR ARC-LAMPS.

SPECIFICATION forming part of Letters Patent No. 760,361, dated May 17, 1904.

Application filed December 16, 1903. Serial No. 185,381. (No model.)

To all whom it may concern:

Be it known that I, LOUIS WOLFF, electrician, residing at Neuenburgerstrasse 24, Berlin, Germany, have invented certain new and useful Improvements in Steadying Resistances for Arc-Lamps; 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.

This invention relates to an improved steadying resistance for arc-lamps which is adapted to be arranged within the case of the lamp itself.

Steadying resistances, helically wound or not and bent into the shape of single or multiple rings or the like, have already been arranged inside lamp-cases, usually above the regulating mechanism. It is also not novel to wind the resistance directly on the solenoid-coil or to use the latter itself as steadying resistance. The arrangement of the resistance above the regulating mechanism has the disadvantage that for that purpose the length of the lamp-case must be increased to an undesirable degree in order to accommodate the resistance. The other methods referred to have the disadvantage of interfering with the regulation of the lamp. If the resistance is simply wound on the solenoid, the electromagnetic effect would be difficult to calculate, owing to the changes of resistance due to the heating effect of the current in the coil and the arc. Adequate cooling of the resistance is impossible in this case and also if the regulating-solenoid itself forms the steadying resistance. These disadvantages are entirely removed by the present invention, which is illustrated in the annexed drawing.

According to this invention a tube or jacket α , of fireproof insulating material, preferably provided with a helical groove, is placed round the regulating-solenoid γ , and the wire of the steadying-resistance w is wound as closely as possible to form a helix, which is thereupon wound round the insulating-tube α . The helical form of the resistance causes the electromagnetic effect of the current in the latter to be entirely neutralized, provided the helix is sufficiently closely wound, and owing to the large exposed surfaced area of the helically-wound resistance sufficient cooling of the latter takes place. The size of the lamp-case need only be increased to a very slight extent in order to accommodate the improved resistance.

What I claim is—

1. The combination, with a solenoid, of a jacket of fireproof insulating material inclosing the said solenoid, and a resistance consisting of a helically-wound wire arranged in helical coils around the said casing.

2. The combination, with an arc-lamp, and a solenoid which regulates the feed of one of its carbons; of a jacket of fireproof insulating material inclosing the said solenoid and a steadying resistance consisting of a helically-wound wire arranged in helical coils around the said casing.

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

LOUIS WOLFF.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.