

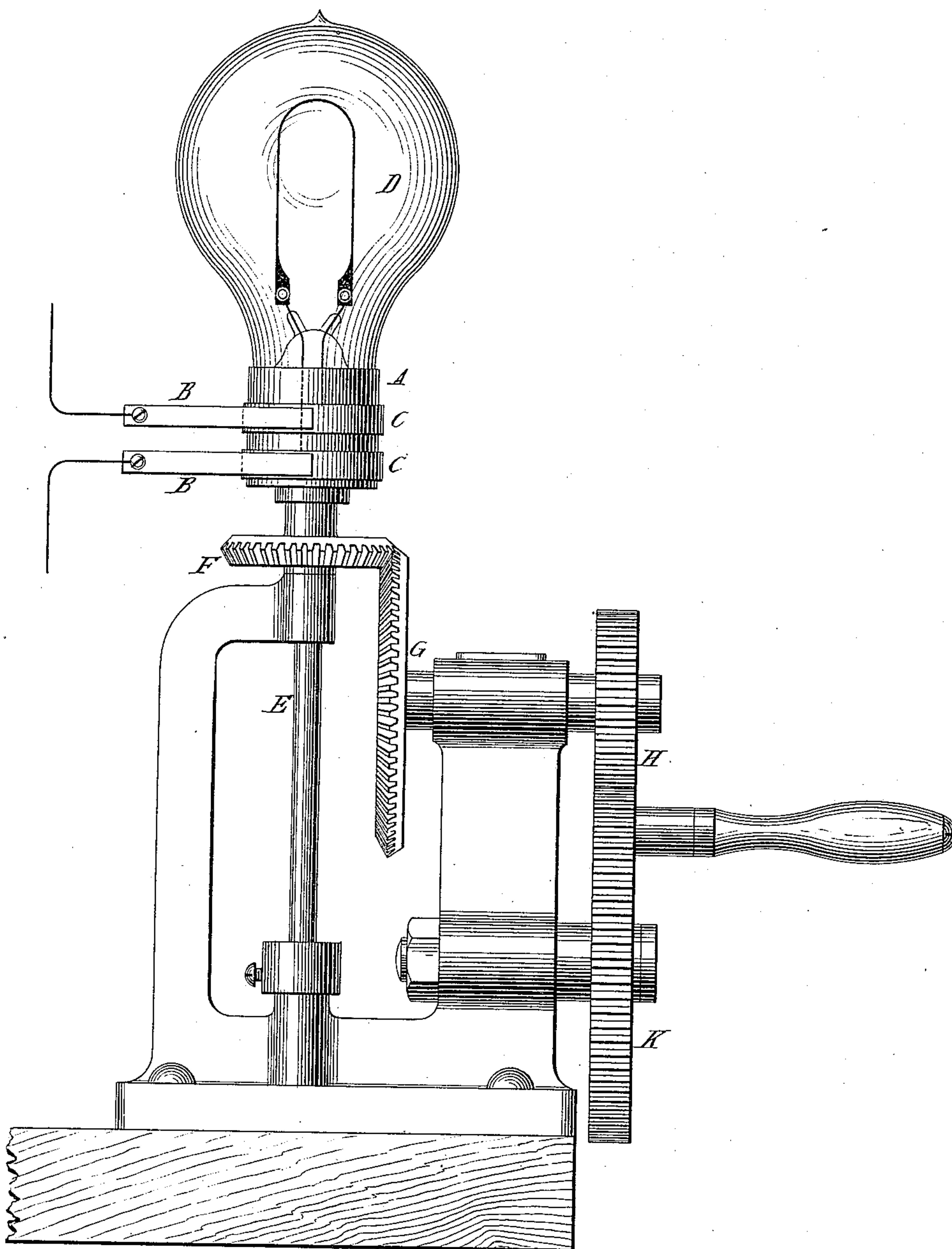
(No Model.)

E. WESTON.

METHOD OF TESTING INCANDESCENT ELECTRIC LAMPS.

No. 334,147.

Patented Jan. 12, 1886.



WITNESSES:

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METHOD OF TESTING INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 334,147, dated January 12, 1886.

Application filed October 13, 1885. Serial No. 179,767. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Methods of Testing Incandescent Electric Lamps, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

My invention consists in a method of testing incandescent lamps or carbons for the purpose of detecting weak or defective spots in the carbons when such exist. It is very difficult to detect the presence of such weak or defective spots except by a very critical and careful examination. A carbon which even at various stages of incandescence appears to the eye to emit a perfectly even light may, nevertheless, contain spots of higher resistance than the remaining portions, and these spots are more highly incandescent, although they may not appear so. The presence of such spots shortens the life of the carbon, as it gives out usually at those points before the rest is impaired.

One method of detecting the presence of weak spots in the carbon I have described in a former patent. This consists in passing an intermittent or undulatory current through the carbon, by which means the weak spots, becoming more luminous than the rest of the carbon, make themselves visible to the eye. I have, however, devised a plan for accomplishing the same object, which presents certain advantages over this method, and is much more sure and reliable. This consists in rotating the lamp or the receiver which holds the carbon loop on a vertical axis, whereby the loop is revolved, say, eight or ten times a second, the carbon being rendered incandescent by a current. This produces the impression of a continuous surface of light, upon which the weak spots, if there be any, appear as bright lines. It is not necessary to raise the carbon to a very high degree of incandescence for this purpose, as the weak spots are most easily de-

tected when the carbon as a whole is a dull red.

This method of testing may be effected by any suitable form of apparatus, and in the drawings I have shown one of such devices.

A is an incandescent-lamp holder. B B are contacts that bear on strips C C around the holder, which strips are in electrical connection with the terminals of the lamp D. The holder A is carried by a vertical spindle, E, on which is a bevel-gear or friction-wheel, F. This is rotated by any convenient means, as by a bevel-wheel and shaft G, driven by cog-wheels H K. The lamp D may be any kind of receiver that will contain a carbon while it is rendered incandescent or practically so. It is not necessary that it be revolved precisely on its vertical axis, as this depends upon the shape of the carbon; but with a lamp and loop of the shape shown this is evidently the most desirable way. When the current is directed through the carbon and it becomes red, it is revolved at a rate sufficient to make the weak spots, if such exist, appear as bands of light. When such bands appear, it is shown at once that the carbon is defective, and that it may be expected to give out within a short time.

What I claim is—

1. The method of testing the carbons of incandescent electric lamps, which consists in moving or rotating the carbons while incandescent at a speed that enables the weak or defective portions, when such exist, to be distinguished by the eye from the other parts of the carbon, as set forth.

2. The method of testing the carbon loops of incandescent electric lamps, which consists in rotating the lamp or receiver containing the loop on a vertical axis while the current is directed through the loop, whereby the weak or defective spots, when such exist, are made apparent to the eye, in the manner set forth.

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Witnesses:

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