(No Model.)

F. C. ROCKWELL.

INCANDESCENT LAMP.

No. 430,485. Patented June 17, 1890.

Fig. 1

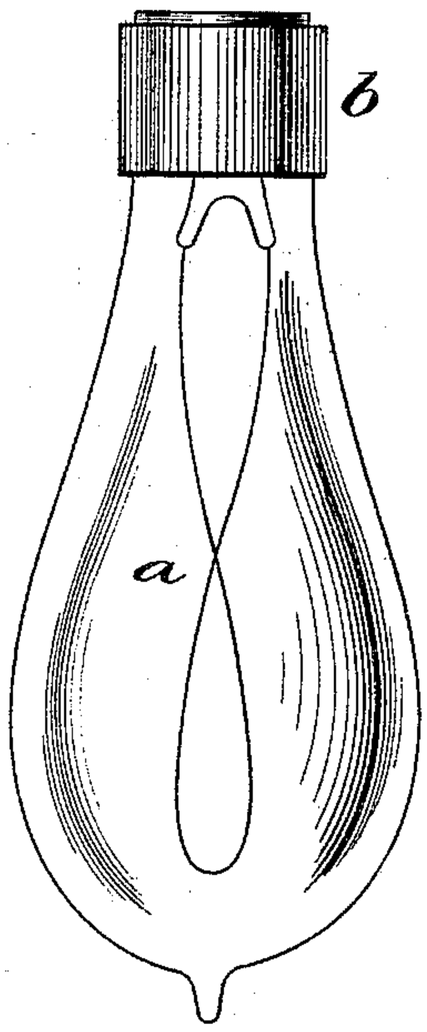


Fig. 4

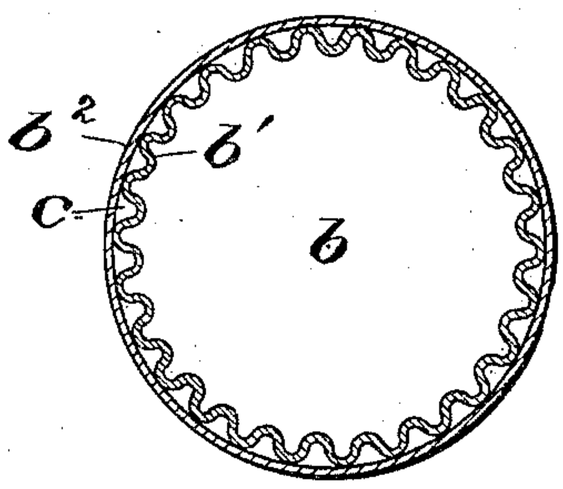


Fig. 5

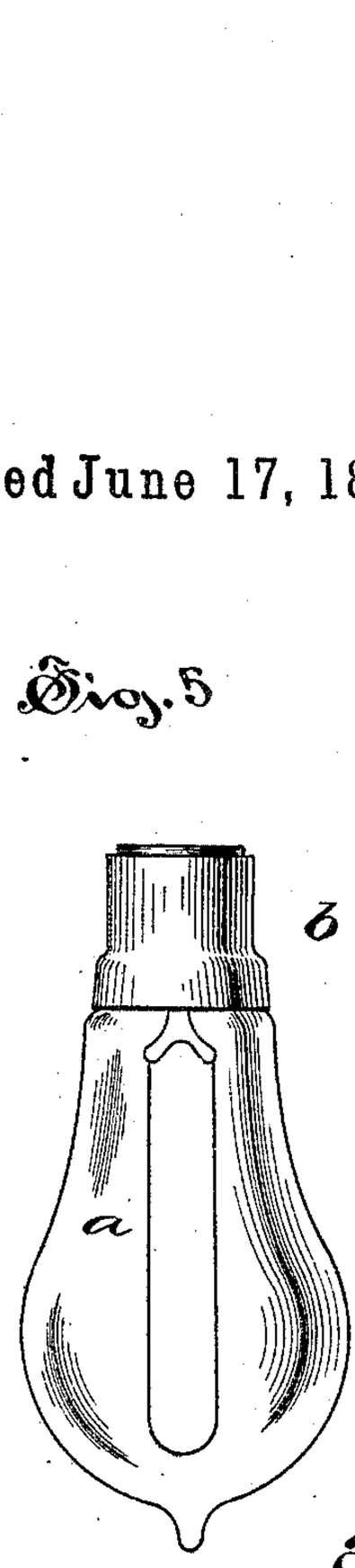


Fig. 8

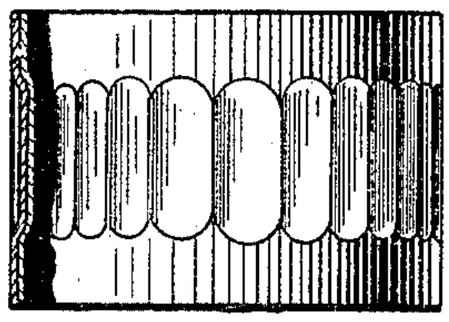


Fig. 7

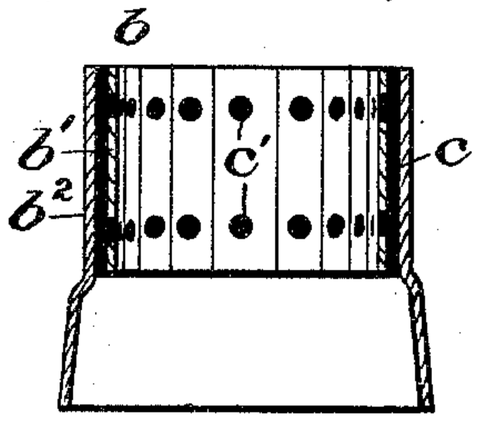


Fig. 3

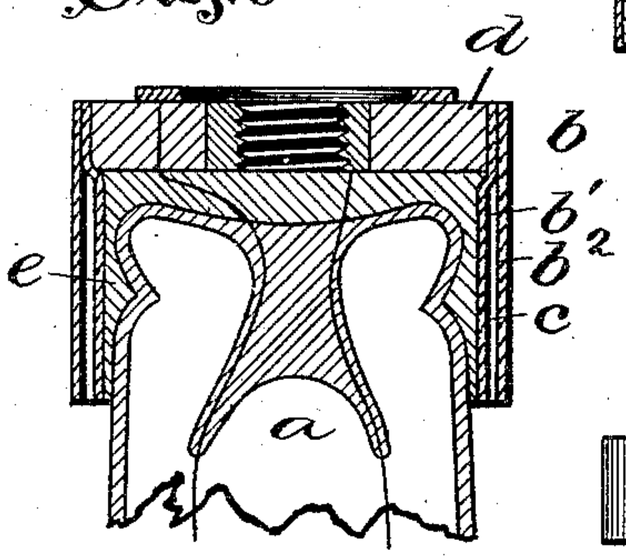


Fig. 6

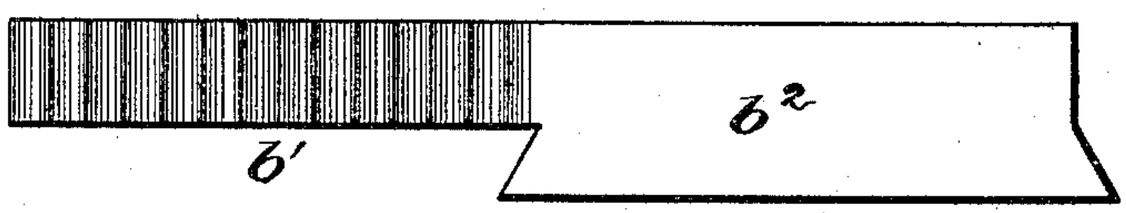
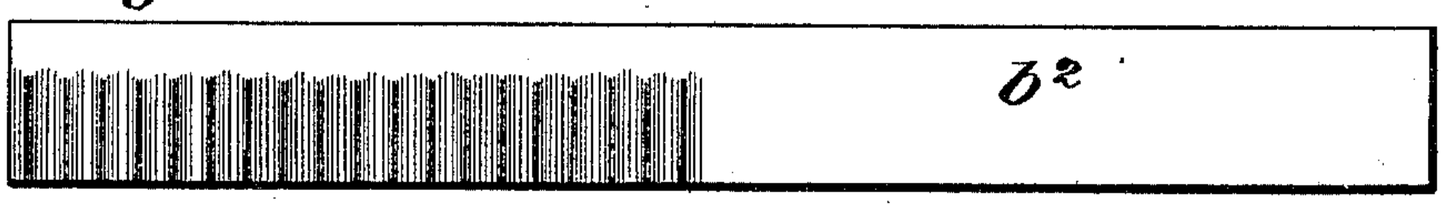


Fig. 2



Witnesses:

Arthur P. Jenkins.

A. F. Langdon

Inventor,

Frederick C. Rockwell,

by Harry P. Williams,

Atty.

UNITED STATES PATENT OFFICE.

FREDERICK C. ROCKWELL, OF HARTFORD, CONNECTICUT.

INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 430,485, dated June 17, 1890.

Application filed February 28, 1890. Serial No. 342,170. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK C. ROCKWELL, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Incandescent Lamps, of which the following is a full, clear, and exact specification.

The improvement relates to the bases of incandescent electric lamps; and the object is to so construct a base for such a lamp that it may be formed firm and strong of a material which is cheaper and more easily manipulated and which possesses more desirable insulating and heat-non-conducting qualities than the material now used, this construction adapting the base to be more securely held to the end of a globe of a lamp than prior bases.

Referring to the accompanying drawings, Figure 1 is a side view of one form of lamp provided with my improved base. Fig. 2 is a plan view of the blank from which the base is formed. Fig. 3 is a view on enlarged scale, in central vertical section, of the base. Fig. 4 is an end view of the base. Fig. 5 is a side view of another form of lamp provided with my improved base. Fig. 6 is a plan view of the blank used in forming the base of the lamp last shown. Fig. 7 is a view, on enlarged scale, in central vertical section, of the base shown in Fig. 5. Fig. 8 is a side view of still another form of base.

In the views, the letter *a* indicates the globe, and *b* the base of a lamp. Previously such bases have been formed of thin brass, which has been first drawn to a cup shape from a flat sheet by the successive action of dies, or which may have been spun to a cup shape over a mandrel, and then had the closed end removed. The shell is then secured to the end of the globe by plaster-of-paris or a similar cement. This method of formation wastes much material, the tools are quickly dulled and worn out, much time and labor is expended in the numerous handlings of the base, and in a short time the cement loosens its grasp on the smooth interior of the base thus formed, so that the globe is liable to drop out.

In forming my improved base *b* a strip of paper or similar material suitably sized or treated is cut to the proper shape and passed between rolls that are preferably heated, which crimp, flute, or corrugate a portion of the strip. These rolls may be so formed that the crimps, corrugations, or flutes may be made to extend completely across the width of the strip, or only partly across, and enough length of the strip is crimped to reach at least once around the base when it is formed. This partially-crimped blank is rolled on a suitably-shaped former, beginning with the crimped end *b'* and ending with the smooth end *b''*, into a cylinder of the desired size of the base, the uncrimped portion *b''* forming the smooth exterior wall for receiving the key-socket, and the crimped portion *b'* forming the interior wall, which greatly stiffens and strengthens the smooth outside wall of the base. The smooth end *b''* of the blank may be made of such length that it can be wrapped around the crimped portion *b'* several times, if desired; or the interior crimped portion and the exterior smooth portion may be formed in two separate cylinders, which can be placed one within the other and glued or cemented together, thus producing the same effect of strengthening the smooth exterior wall by a crimped interior. The base thus formed is then dipped into or coated with a solution, preferably a dissolved gum, possessing a high degree of insulating and heat-non-conducting capacity, which, when hardened by heat or pressure, so stiffens that a rigid and firm base is formed which possesses superior insulating and heat-non-conducting qualities.

A piece of insulating material *d*, bearing the usual conductors for connecting the socket-conductors with the leads to the filament, is placed in one end, and the base secured to the end of the globe by a suitable cement *e*, as plaster-of-paris, which is molded into the base around the end of the globe in a moist condition. It will be impossible for the base to work loose and turn after the cementing material has dried, as occurs with the prior bases, as the cementing material packs and becomes embedded between the ridges of the flutes or corrugations of the interior of the base to which the cement more firmly adheres than to the smooth metallic interior of the prior bases.

The spaces *c* between the inner corrugated wall *b'* and the smooth exterior wall *b''* of the

base may be filled with the insulating material with which the base is treated; or perforations *c'* may be made through the corrugations, so the cementing material *e* will flow into the spaces and stiffen the base, as well as more firmly hold the parts together, or the spaces *c* may be left open, so as to form air-chambers in order that the cementing material may dry out more quickly. A base thus corrugated or indented can be cheaply formed of inexpensive material and will possess sufficient rigidity and strength, and be insulating and heat-non-conducting, which are qualities much desired in the bases of lamps of this nature.

I claim as my invention—

1. A base for an incandescent lamp, consisting of superimposed layers of a thin non-conducting material, the inner layer of said material being corrugated or indented and the exterior smooth, substantially as specified.

2. A base for an incandescent lamp, consisting of layers of a thin non-conducting material wrapped about each other, a portion of the inner wraps of said material being corrugated or indented, substantially as specified.

FREDERICK C. ROCKWELL.

Witnesses:

H. R. WILLIAMS,

A. F. LANGDON.