A. BLISS.

Lamp Insulator.

No. 37,212. Patented Dec. 23, 1862.

Fig: 1.

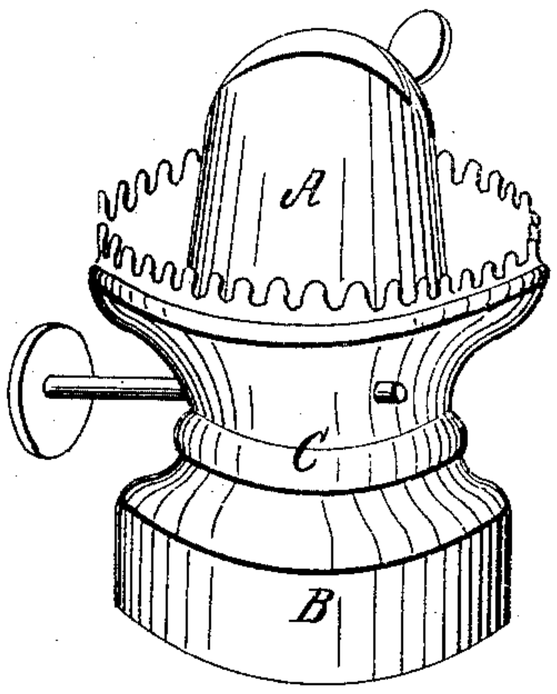
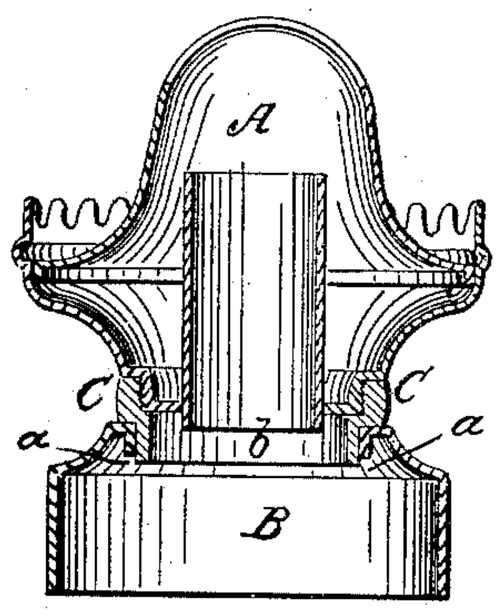


Fig: 2.



UNITED STATES PATENT OFFICE.

ALFRED BLISS, OF NEW ROCHELLE, NEW YORK.

IMPROVEMENT IN LAMP-INSULATORS.

Specification forming part of Letters Patent No. **37,212**, dated December 23, 1862.

To all whom it may concern:

Be it known that I, ALFRED BLISS, of New Rochelle, in the county of Westchester and State of New York, have invented a new and useful Improved Construction of Lamps; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings which accompany and form a part of this specification.

Of these drawings, Figure 1 is a perspective view of a lamp burner and socket attached together, with my improvement applied; and Fig. 2 is a vertical section of the same parts, showing more clearly the construction and mode of applying my invention.

My invention is more particularly designed to be applied to lamps intended for burning coal and kerosene oils and those substances which require for combustion an excess of oxygen, and relates to the construction of the connections between the oil-reservoir and the burner.

It consists in providing a cheap and efficient means for preventing all, or nearly all, conduction of heat from the flame of the lamp to the oil in the reservoir, thereby economizing the consumption of the burning material, and this I accomplish by wholly or partially lining or fitting the interior of the socket, which is fastened to the upper part of the lamp-globe, and into which the burner is screwed, with a rim, ring, or collar of gutta-percha or india-rubber, so arranged as to interpose a non-conducting substance all around the open part of the oil-reservoir between it and the heat generated from the flame.

To enable others skilled in the art to which my said invention relates to understand and make use of the same, I will describe its construction and mode of operation.

A represents the burner of a coil-oil lamp, formed in the usual manner. B is the body of the socket, which is to be cemented or otherwise fastened to the lamp-globe, as commonly practiced, and into which the lower part of the burner is ordinarily secured by being tapped in. C is a ring or collar, of gutta-percha or india-rubber, provided with a screw-thread on its outer surface at *a*, and also on its inner surface at *b*. The socket B, I make with the same-sized central hole as common, and with a screw-thread upon its interior, as usual. This thread is made to fit with that upon the outside of the collar C, and by that means the collar is secured tightly to the lamp-globe. On the lower end of the burner is a screw-thread fitting with that at *b*, and it will thus be obvious that when the burner and globe are connected there will be a non-conducting substance, composed of the collar C, interposed between the heat from the flame and the oil in the reservoir, thereby keeping the latter always cool and checking waste, as well as preventing danger of explosion by the vaporization of the oil within the reservoir. The internal screw-thread, *b*, may be confined to the upper part of the collar or insulator C, and made equal in diameter to the thread of the metal socket B, the neck of the burner screwing down onto a shoulder within the collar. In this the burner or top A of a lamp of common construction may be screwed out, the insulator screwed into the socket B, and the same burner screwed into the insulator. The insulator may thus constitute a distinct and complete article of manufacture and trade, adapted for use in common lamps without any change in their construction.

Among the advantages resulting from the use of the particular material or materials herein specified may be mentioned that their plastic character under certain conditions adapts them to be readily and economically molded into the required form; and, further, that their complete impermeability prevents any saturation with oil, which impairs the insulating effect of wood and other porous substances.

I am well aware that previous to my invention certain non-conducting substances have been attempted to be used for the purpose stated; but either the substances themselves have been wholly different from that which I employ or they have been applied in a different manner from my invention.

I am a practical lamp-manufacturer, and in all the devices for this object which I have seen the mode of application of the non-conductor has been such as to render them expensive to make, as well as injurious to the firm connection of the parts of the burner; but I do not claim the use of all non-conductors whatever for the purpose mentioned; neither do I claim, broadly, the use of gutta-percha or india-rubber in the manufacture of

non-conductors or insulators for coal-oil lamps; but I know of no previous instance in which either of these materials has been employed in an insulator constructed as mine, and so as to entirely prevent contact between the metallic surfaces of the socket and burner.

What I claim as my invention, and desire to secure by Letters Patent, is—

An insulating-collar, of gutta-percha or india-rubber, constructed with an internal thread, *b*, to receive the burner A, and an external thread, *a*, to screw into the socket B, substantially as herein shown and described, and adapted to entirely prevent contact between the metallic surfaces of the lamp top and socket, as explained.

ALFRED BLISS.

Witnesses:

ANDREW J. TODD,

S. D. COZZENS.