

William H. Russell's  
Improved Screw Collar, for Lamps &c.

PATENTED JUN 7 1870

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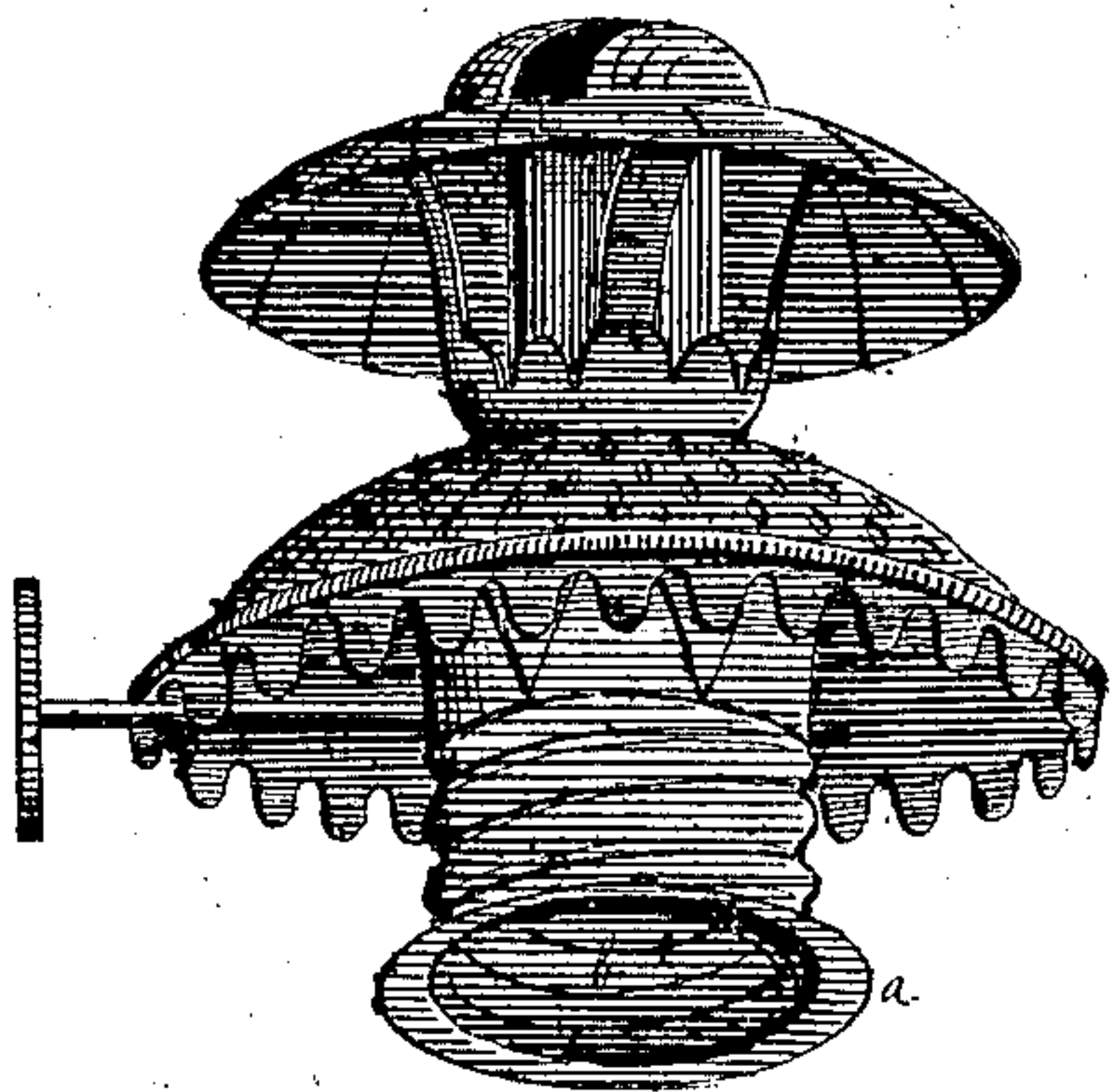


Fig 3.

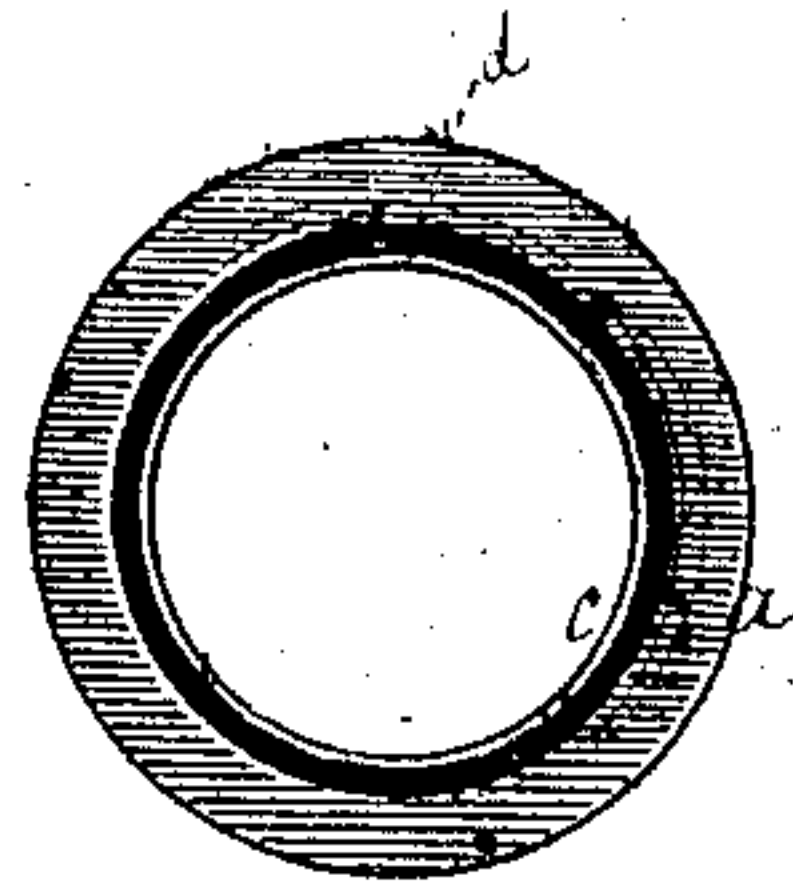


Fig 2.

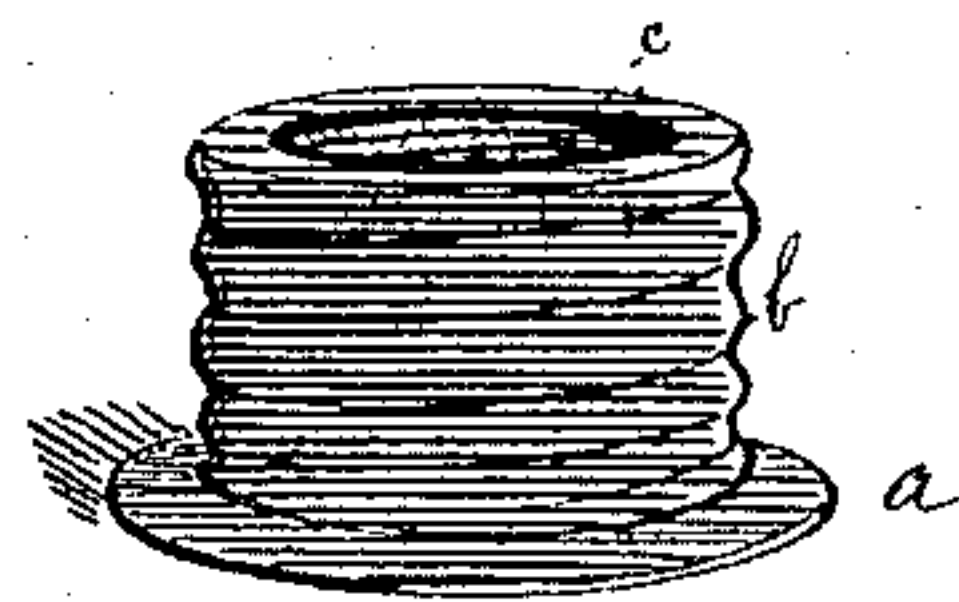


Fig 1.



Fig 4.

Witnesses

Osborn T. Eaton.

Edmund D. Nye

Inventor Wm H Russell

# United States Patent Office.

WILLIAM H. RUSSELL, OF BROOKLYN, NEW YORK.

Letters Patent No. 104,066, dated June 7, 1870.

## IMPROVEMENT IN SCREW-COLLARS FOR LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM H. RUSSELL, of the city of Brooklyn, county of Kings and State of New York, have invented a certain Improvement in Screw-Collars for Lamps, of which the following is a full, true, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view of a collar constructed according to my invention.

Figure 2 is a bottom view of the same.

Figure 3 is a perspective view of a burner furnished with one of my collars.

Figure 4 is a perspective view of a lamp with my collar and burner attached.

There has long been felt among lamp-manufacturers the want of a different method of securing collars to lamps than that usually employed of cementing them in their places by plaster, and different inventors have tried to find a way of accomplishing this by forming a thread on the neck and a corresponding thread in the collar, so as to connect the parts by screwing them together; but, as it is practically impossible to make a tight joint by any of the methods heretofore employed, these different devices have never come into use.

The object of this invention is to overcome this difficulty, and to produce a collar which can be easily fastened on the oil-reservoir without the necessity of cement, and at the same time be perfectly secure from the liability of leakage; and to this end a flange is added to the ordinary screw-collar, which admits of a packing-ring being placed between the top of the reservoir and the said flange. This effectually prevents any chance of leakage, which is always likely to occur in screw-collar lamps unless cement is used.

Figure 1 shows my improved collar, which, in detail, consists of a flange, *a*, a spiral grooved or threaded tube, *b*, and a shorter tube, *c*, in which is cut a female-screw thread in the usual manner.

Between this and the outer tube is a space or cavity, *d*, which may be left large enough to allow packing material to be placed therein.

In using this collar, all that is required to hold it secure and make it tight enough to prevent leakage, is to procure a washer of packing material not affected by the oil to be used, such as felt, cloth, leather, paper, or other similar substance, thoroughly saturated with paraffine, stearine-wax, or other analogous ingre-

dient, and screw the collar onto a lamp that has a screw pressed, cut, or otherwise formed on its neck, with the said washer *e* interposed between the top of the body of the lamp and the flange *a*, as shown in fig. 4.

Although, as before stated, packing may be inserted in the space *d*, yet the best place is that between the flange *a* and the top of the lamp, as that portion of the lamp is always smooth and at a suitable angle to the neck, so that the washer will always keep the oil from leaking; but if the packing is placed up in the space inside the collar, it is necessary that the top of the neck be carefully ground off, as this portion of the lamp is always left rough and ragged when it leaves the mold.

In view of this, the advantage of a flange like that shown in my collar is at once apparent, as it saves the trouble and expense of grinding the top of the neck smooth, and the large amount of breakage incidental to this operation.

It is obvious that the collar may be changed in some respects without varying the character of my invention, by using two or more short grooves instead of one long one; or, in place of a spiral groove or screw-thread, lugs or projections may be formed inside of the collar, of such shape and position as will allow them to enter a groove or grooves in the neck of the lamp.

I am aware that it is not new to form a screw on the neck of a lamp, and a corresponding spiral groove in a collar to fit said thread; also, that the use of a packing-ring, differently applied, is old; and that fruit-jar caps have been furnished with flanges to hold the packing. None of these points do I claim, broadly; but

What I do claim, and desire to secure by Letters Patent, is, as a new article of manufacture—

The lamp-collar herein shown, having the short-threaded tube *c* to receive the burner, the spiral grooved tube *b* to fit the neck, and the flange *a* to secure the packing, all arranged as described and for the purpose set forth.

This specification of my invention signed this 12th day of February, 1870.

WM H. RUSSELL.

Witnesses:

E. H. WOODRUFF,  
O. P. CHAMBERLIN.