

T. B. DOOLITTLE.

LAMP SHADE.

No. 75,390.

Patented Mar. 10, 1868.

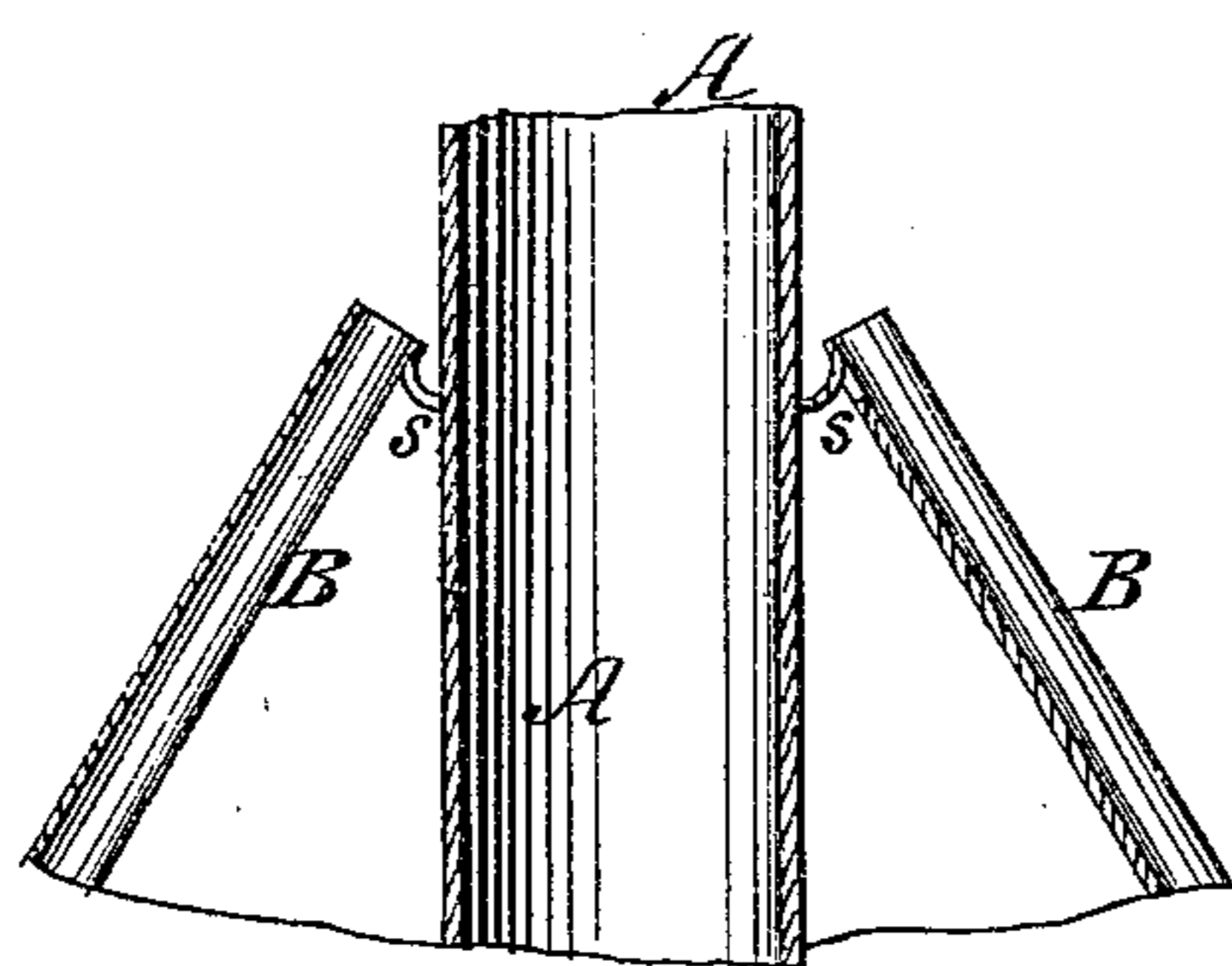
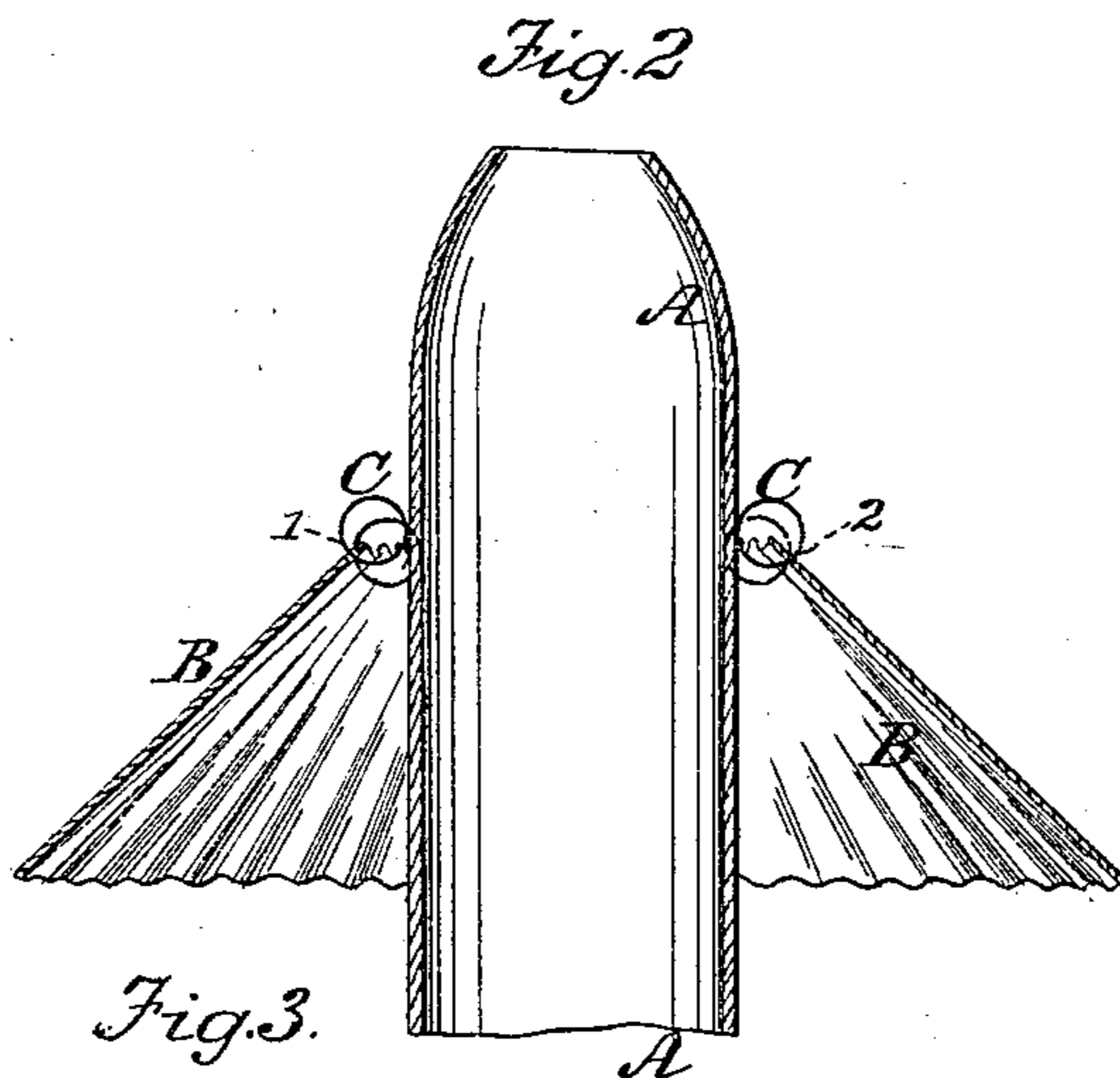
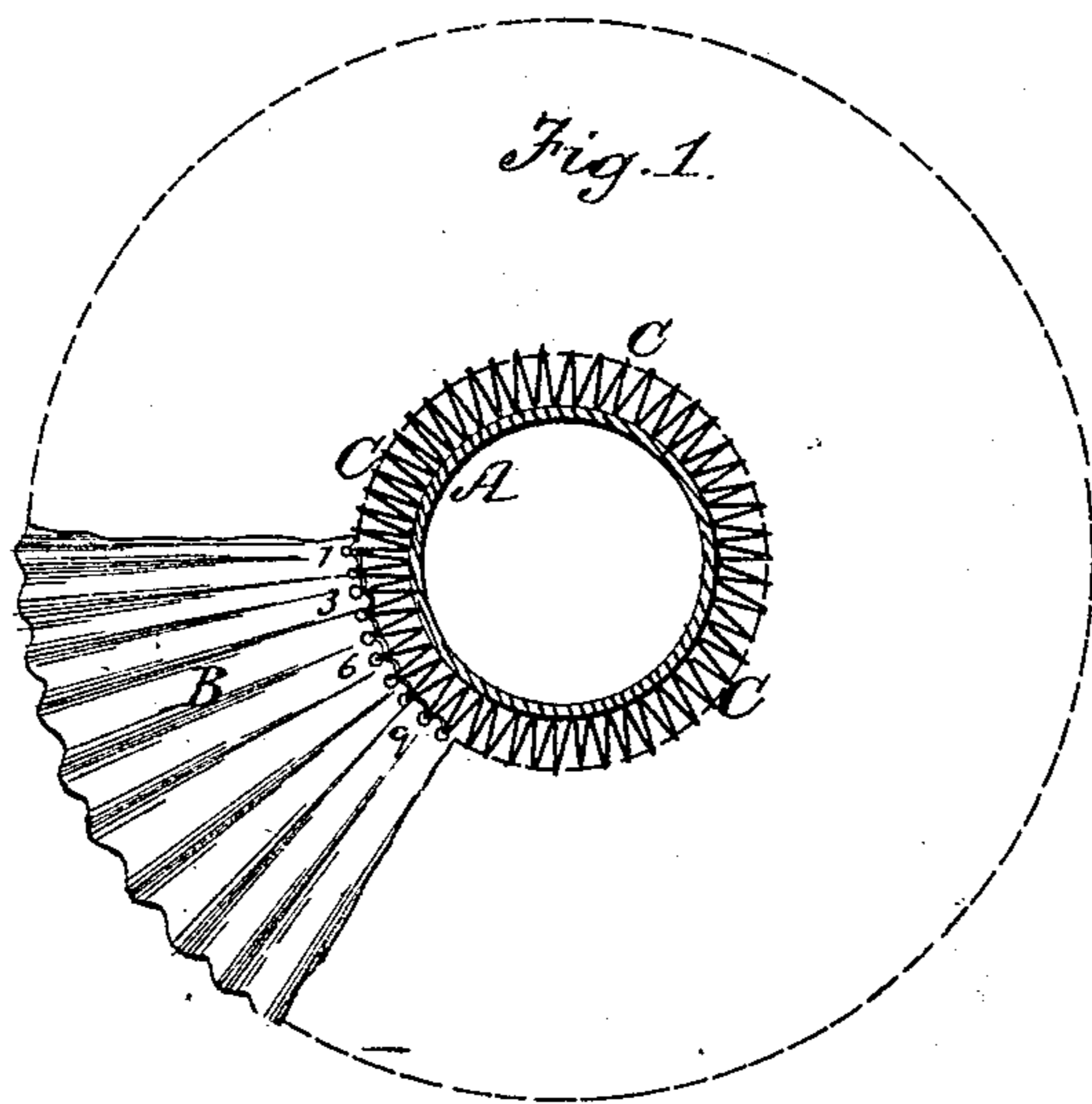
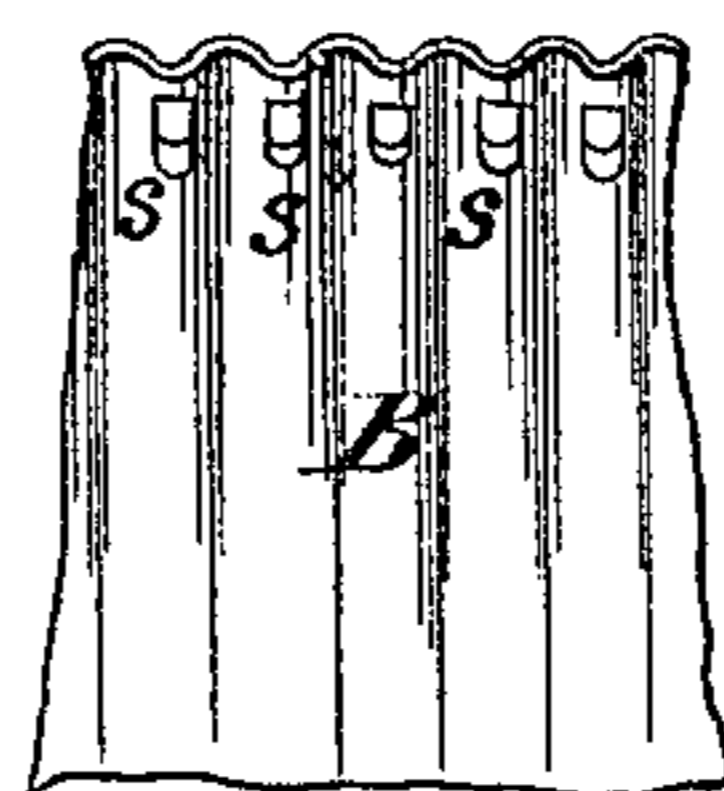


Fig. 4.



Witnesses.

J. Scott.
Edward S. Smith.

Inventor.

T. B. Doolittle

By Atty

John S. Suter

United States Patent Office.

T. B. DOOLITTLE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO HIMSELF,
GEORGE DOOLITTLE, AND GEORGE H. DIMOND.

Letters Patent No. 75,390, dated March 10, 1868.

IMPROVEMENT IN LAMP-SHADES.

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, T. B. DOOLITTLE, of Bridgeport, of Fairfield county, in the State of Connecticut, have invented certain new and useful "Improvements in Lamp-Shades;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My invention relates to certain new and useful improvements in that kind of lamp-shades which is intended and adapted to be placed upon and be sustained by the chimney of the lamp, and has for its main object to supply the want of an economic and effective shade and reflector adapted to be used on the chimney of the common kerosene-lamp. And my invention consists in making a lamp-shade of a corrugated or crimped sheet of thin brass or other suitable material, in such manner that it shall be capable of sufficient expansion to permit of its being forced or sprung down over and so that it will cling to the chimney of the lamp, all as will be presently more fully described. And my invention further consists in the employment, in combination with a lamp-shade, of a holder-spring or springs, such as hereinafter more fully described, arranged on the upper edge of the shade, and adapted to clasp the chimney of a lamp and retain the shade thereon, all as will be presently more fully explained. And my invention further consists in forming a yielding or expansible metallic shade, with projecting bearing-points or teals, to rest in contact with the chimney and hold the upper portion of the shade sufficiently far from the chimney to prevent the shade getting too hot, all as will be presently fully described.

To enable those skilled in the art to make and use my invention, I will proceed to describe the construction and operation of the several features of my said improvements, referring by letters to the accompanying drawings, in which—

Figure 1 is a top view of one of my new metallic lamp-shades, shown as applied to the chimney of a "sun-burner" kerosene-lamp.

Figure 2 is a vertical section of the same.

Figure 3 is a vertical section of another shade, (and chimney,) showing the third feature of my invention; and

Figure 4 is a partial inside view of shade, illustrating more particularly the bearing-teals.

In the several figures the same letters of reference denote the same part.

A is the lamp-chimney, and B the shade, which I propose to make of thin sheet brass in about the shape seen in the drawings, with its top opening sufficiently large to permit the accommodation within it of the chimney A, as shown. C is a spiral spring arranged at the top edge of the shade B, being run into holes 1, 2, 3, &c., made near the edge of shade B, as clearly seen at figs. 1 and 2. This spring-roll or spiral coil C surrounds and clings to the chimney A, and holds the shade thereon at any desired point or elevation. At figs. 3 and 4 the shade B is made with a series of inwardly-projecting teals, *s s s*, near its top edge, which bear against the chimney A, the shade B in this case being retained on the chimney by the spring or elasticity of the shade itself, of which it has a sufficiency, in consequence of being made, as shown and described, of thin sheet brass, corrugated or crimped as illustrated. The object and advantage of the teals *s*, (which are formed by simply striking up projections with a die) are to hold the upper edge of the shade B far enough away from the chimney to permit a free circulation of air up around the outside of the latter, and to avoid the liability of the shade to get too hot, as it would if it rested completely in contact with the glass chimney of the lamp at its upper edge. The size, proportion, and flare of the shade may of course be varied at pleasure, although it will be found advisable, in constructing it to be used without any spring, C, to have the flare or taper sufficient and the corrugations fine enough to insure a proper amount of spring or expansive and contractive capability to the shade as to insure its spreading around on and clinging to the chimney.

I propose to prepare the under surface of the metallic shade suitably to make it perform the office of a good reflector, as well as shade, and it will be seen that a shade constructed according to my invention may be very readily adjusted (vertically) on the ordinary straight (or nearly straight) chimney, and that it will be

exceeding light and convenient for use, while at the same time it will be extremely simple, durable, and economic of manufacture.

It will be understood that an effective and most desirable shade and reflector may be manufactured by simply forming the shade of thin sheet brass so corrugated or crimped as to have sufficient elasticity or spring to it to clasp and retain itself on the chimney without using the other two features of my improvements, the spiral spring and bearing-teals, but it may be found more advantageous to use the teals *s.* When no spring, C, is employed, and although a sufficient amount of expansive capacity or spring may be induced in the shade itself if formed of the right material, of proper thickness, and suitably corrugated, I propose generally to employ the spiral spring C, or its equivalent, as by the use of it, in connection with the shade B, as shown, I am enabled to make the opening in the top of shade larger and get more yielding or a greater scope of adjustment, so that the shade can be used on chimneys varying considerably in their diameters. And it will be seen that in the use of the spring C on the shade B, the former will roll over or spread considerably to permit the insertion of a chimney quite as large as the opening in the top of shade, and that if the shade be forced down over a chimney even larger than the said opening, the spring will yield first to its full extent, and then the shade itself will yield, and by its own elasticity cling to the chimney.

It will be understood that in lieu of the continuous spiral spring running entirely around the top edge of shade, disconnected separate pieces of spiral spring may be placed at intervals around the edge of shade, and so adapted as to roll or yield in the manner described and shown of spring C; but I deem the continuous spring good, and it is readily attached and secured so as to roll over when spread by the insertion of the chimney (as illustrated by the positions shown by red and black lines at fig. 2.)

It may be remarked that the spiral clasp or spring shade-holder C may be applied with great advantage to other shades than the kind made in accordance with the other features of my invention; and it will be readily seen that this feature of my invention (the coil-spring clasp) can be applied to the top edge of any paper or other shade suitably made, and thus be used advantageously without using the other features of my invention. I therefore wish to be understood as not limiting my claim of invention, in respect to the spring-clasp, to its use in connection only with the other features of my invention, though I have practised it so far in that connection; but having fully described the construction and operation of my invention,

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

1. A lamp-shade or reflector, formed of sheet metal adapted to be applied to the chimney of a lamp, and so corrugated or crimped as to be capable of sufficient spring or elasticity to permit it to be sprung on to the chimney, substantially as described.

2. I claim the employment, in combination with a shade or reflector, of a spiral or coil spring or springs arranged in the upper edge of the shade so as to roll over a spring-back, substantially as described for the purpose set forth.

3. I claim forming a corrugated or crimped metallic shade, with projecting teals or lips *s s*, substantially as described for the purpose set forth.

In testimony whereof, I have hereunto set my hand and seal, this twenty-fourth day of January, 1868.

T. B. DOOLITTLE. [L. S.]

Witnesses:

WM. H. LORD,
GEO. W. WARNER.