

No. 803,798.

PATENTED NOV. 7, 1905.

A. I. VAN VRIESLAND.
INCANDESCENT MANTLE.
APPLICATION FILED JUNE 1, 1905.

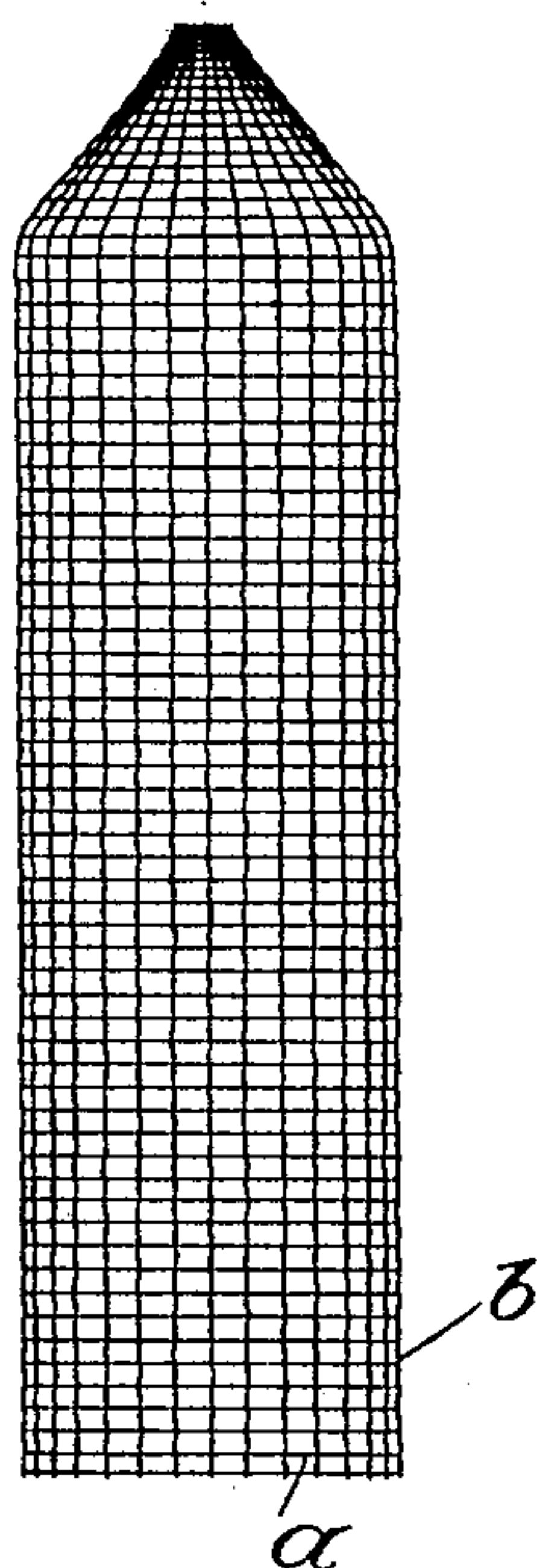


fig. 1.

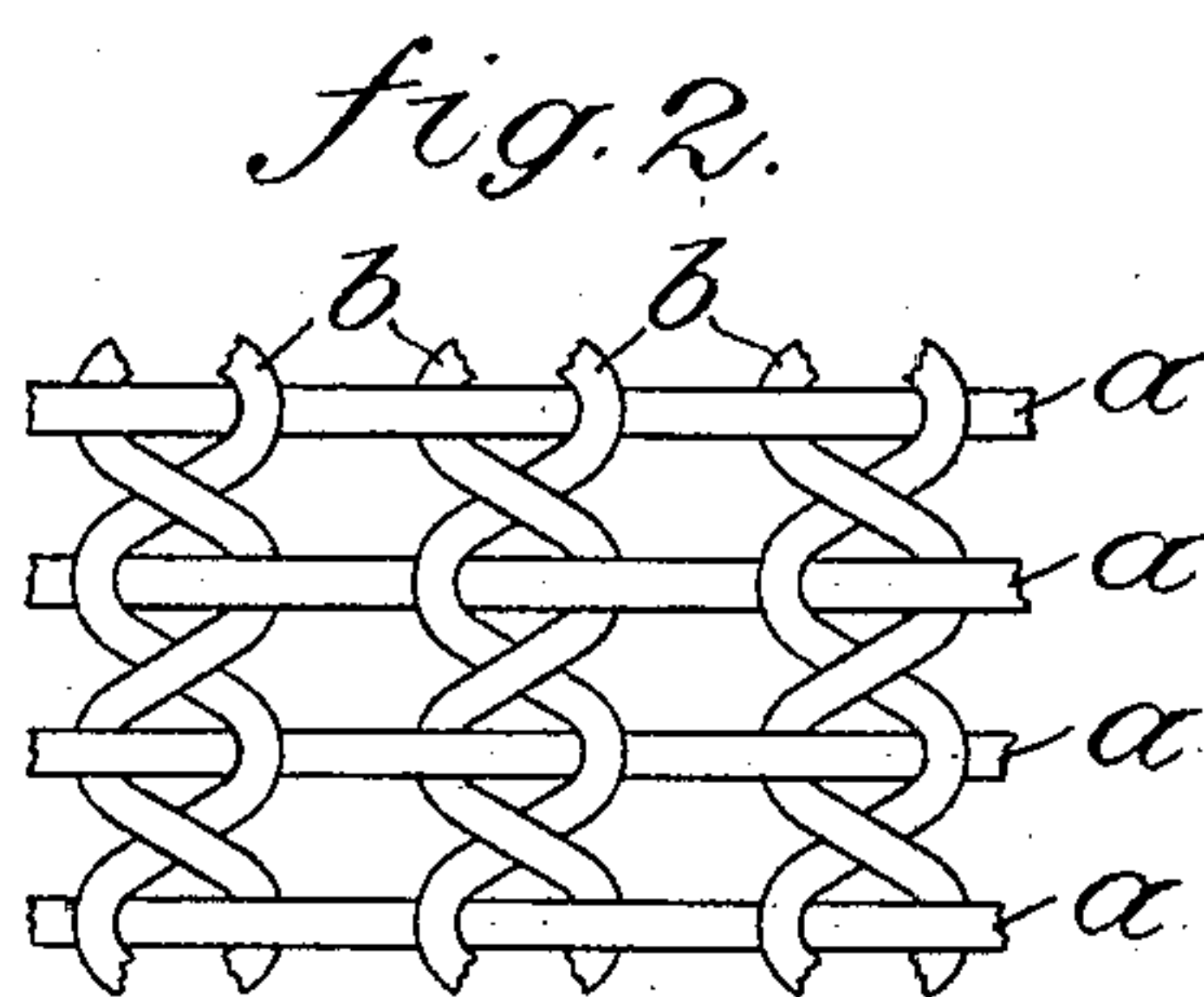


fig. 2.

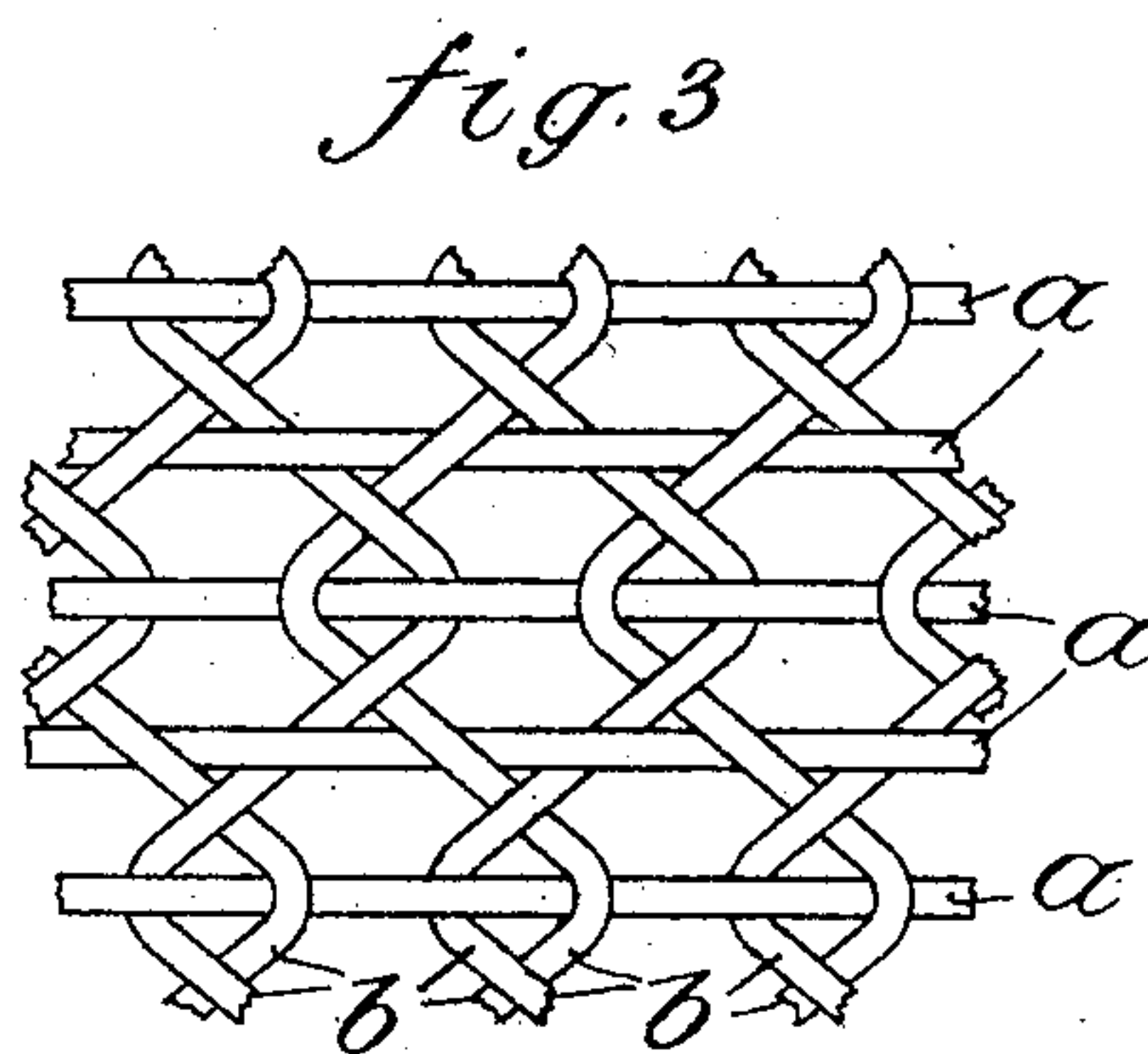


fig. 3.

Witnesses

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ADOLPHE ISIDORE VAN VRIESLAND, OF SCHEVENINGEN, NETHERLANDS.

INCANDESCENT MANTLE.

No. 803,798.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed June 1, 1905. Serial No. 263,356.

To all whom it may concern:

Be it known that I, ADOLPHE ISIDORE VAN VRIESLAND, manufacturer, a subject of the Queen of the Netherlands, residing at Oude Scheveningsche weg 72, Scheveningen, Netherlands, have invented new and useful Improvements in Incandescent Mantles, of which the following is a specification.

The subject of my invention is a woven incandescent mantle, which differs from prior like mantles, inasmuch as it is made of so-called "cross-woven" fabric or gauze—that is to say, of webbing in which between each two weft-threads the warp-threads or groups of warp-threads are twisted or crossed.

Hitherto there have been employed only knitted mantles and mantles of woven fabric, the threads of which crossing at right angles or obliquely run in a straight line.

The disadvantage of knitted mantles is that during the process of burning off the article is liable to shrink, whereby the meshes are contracted and the illuminating power thus detrimentally affected.

Woven mantles, again, with threads running only in a straight line have the defect that the threads are not sufficiently intimately connected one with the other, so that during the various operations to which the hose is submitted before the mantle is actually finished the relative positions of the threads get altered. This is decidedly disadvantageous both in respect to the durability and the appearance of the mantle. Furthermore, when such plain woven hose is severed the edges readily fray, so that waste of the web and of the incandescent material is unavoidable.

By employing cross-woven fabric for mantles, on the other hand, the inextensibility of the article is maintained, and thus contraction of the meshes on burning off avoided, while great strength and firmness is insured, since the threads are exceedingly intimately interwoven.

The new mantle thus unites the advantages of high illuminating power and great durability.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a cross-woven mantle. Figs. 2 and 3 are detail views, drawn to a larger scale, illustrating, by way of example, two of the many kinds of cross-woven fabrics which may be used.

a are the weft-threads, and *b* the warp-threads, which are turned or twisted together, so that they do not run in a straight line, and, as will be seen from the drawings, the warp-threads *b* are arranged so that the weft-threads *a* pass over every alternate and under every alternate warp-thread *b*, said warp-threads being arranged in pairs, each pair being separated from the succeeding pair and one of the threads of one pair crossing over upon its fellow thread between each successive weft-thread.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

As an article of manufacture, a mantle for incandescent gas-lighting purposes having weft-threads *a* and warp-threads *b*, said threads being treated with an incandescing material, said warp-threads *b* being arranged in pairs, said pairs of warp-threads being separated from each other, the weft-threads *a* passing over every alternate warp-thread *b* and under every alternate warp-thread *b*, one of said warp-threads of each pair of warp-threads crossing over upon its fellow warp-thread between each successive weft-thread *a*, said weft-threads *a* being separated from each other in such manner that open meshes are formed by the said weft and warp threads and said threads are held in their proper relative positions during the treatment of the fabric, and uniformity of the meshes of the incandescing material insured after the burning out of the fabric.

In witness whereof I have hereunto signed my name, this 15th day of May, 1905, in the presence of two subscribing witnesses.

ADOLPHE ISIDORE VAN VRIESLAND.

Witnesses:

HENRI ANTOINE SCHMITT,
GERRIT HENDRIK SCHMITT, Jr.