

(No Model.)

W. M. MARSHALL.

REFLECTOR AND REFLECTING CHANDELIER.

No. 387,430.

Patented Aug. 7, 1888.

Fig. 1.

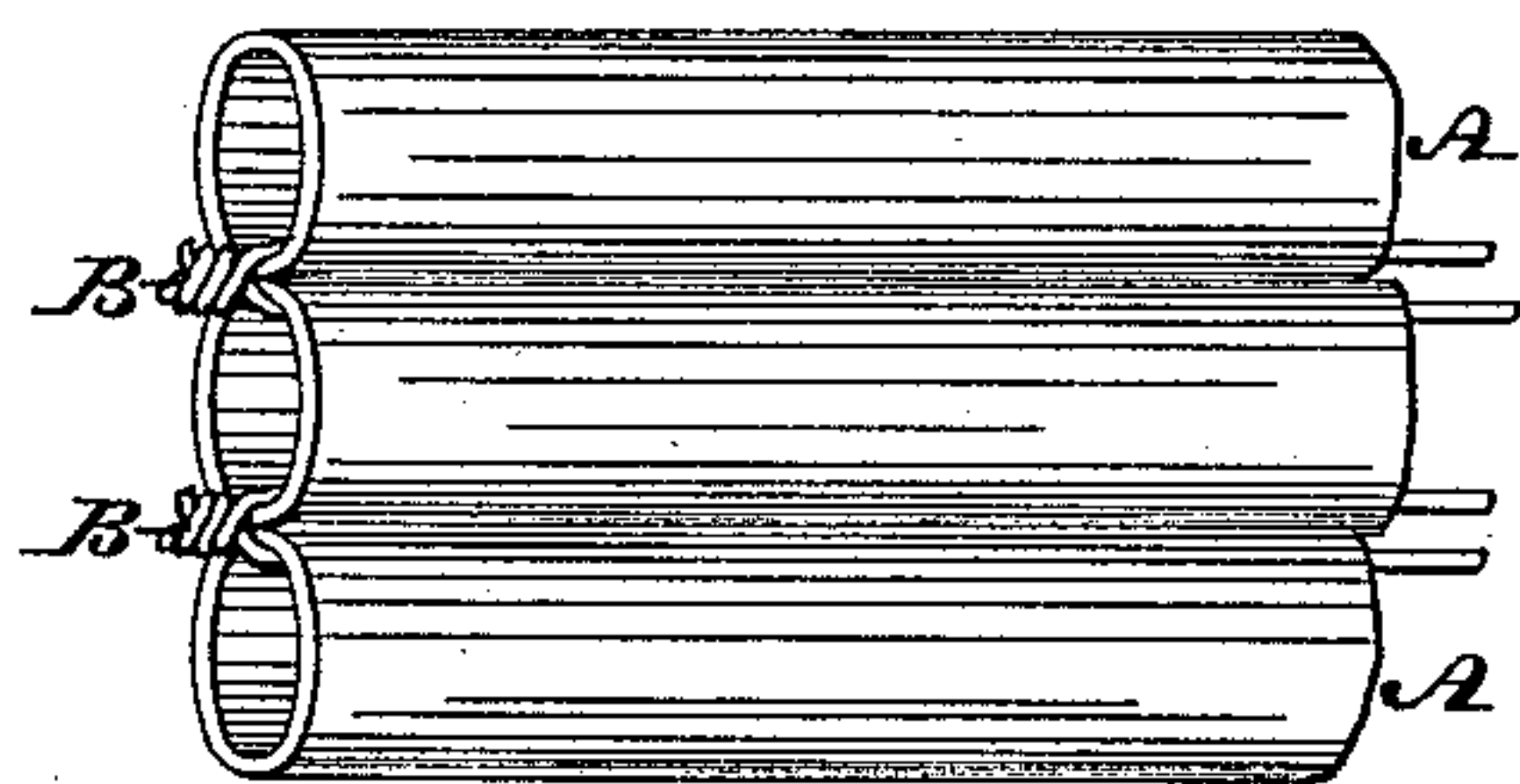


Fig. 2.

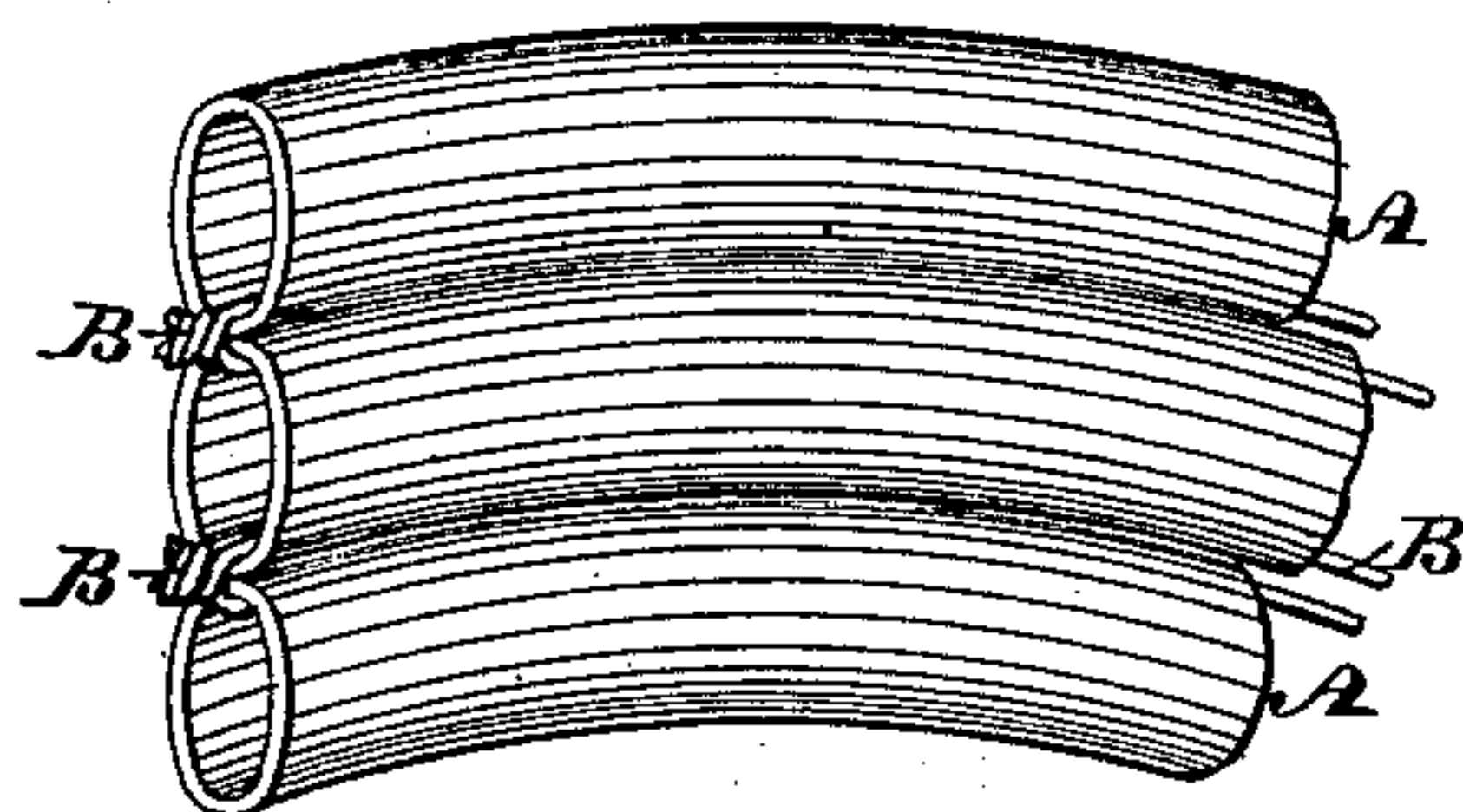


Fig. 3.

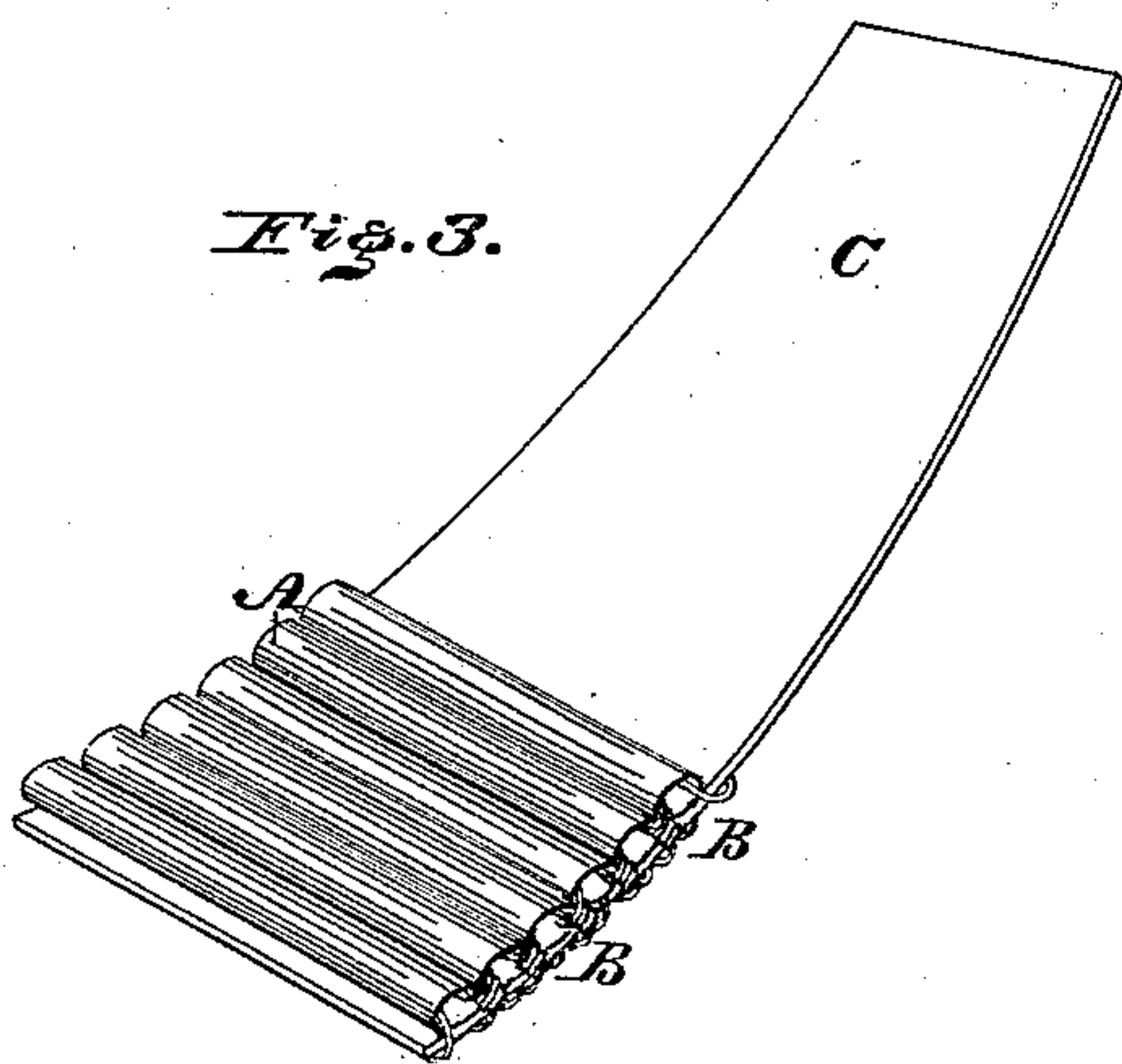
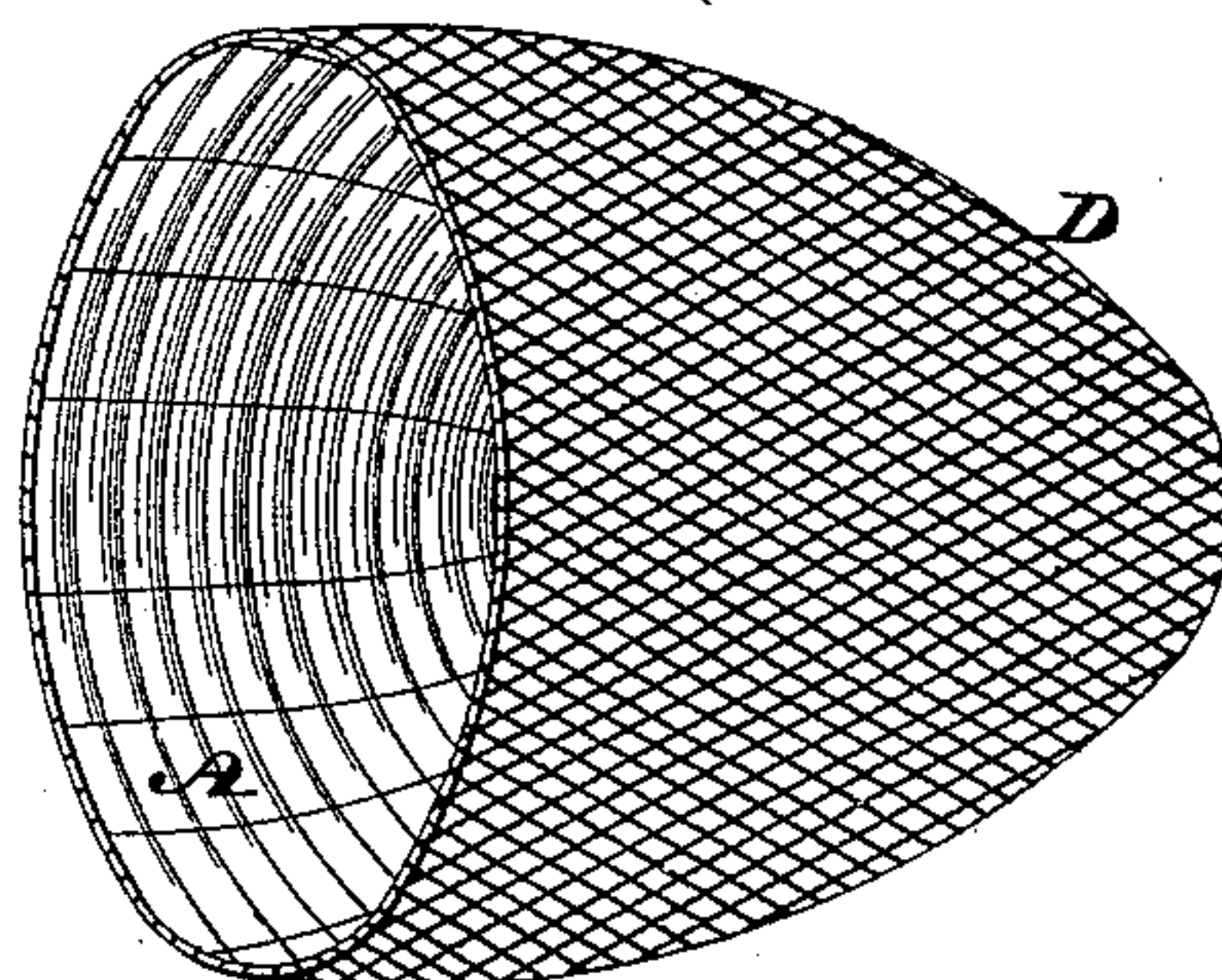


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## REFLECTOR AND REFLECTING-CHANDELIER.

SPECIFICATION forming part of Letters Patent No. 387,430, dated August 7, 1888.

Application filed March 7, 1885. Serial No. 158,062. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. MARSHALL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Reflectors and Reflecting-Chandeliers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 represents several straight glass tubes secured together according to my improved method. Fig. 2 represents several curved glass tubes secured in a similar manner to those shown in Fig. 1. Fig. 3 represents a number of glass tubes secured to a foundation. Fig. 4 represents a wire frame or foundation having curved tubes secured therein.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to improvements in reflectors; and it consists in the various details hereinafter fully set forth and clearly described in this specification.

25 Referring to the drawings, A represents tubes of hollow glass having their inner surfaces suitably prepared for reflecting purposes in any well-known manner. These tubes are first cut into the lengths required, according to the style, size, and shape of the reflector to be made, and may be straight, as shown in Fig. 1, or curved, as in Fig. 2.

35 Round rods may be used; but I prefer flattened ones, as presenting more reflecting-surface. The tubes after being cut are fastened

together by means of fine wires B B, passing through the same, having their extended ends twisted together in pairs, as shown in Fig. 1, so as to securely bind the tubes together. The rods thus fastened are now placed upon a foundation, C, and firmly secured thereto by bending the twisted wire over the edges thereof. The said foundation may be either straight or curved and be composed of pasteboard, papier-maché, tin, or of wire mesh, (see Fig. 4,) which is readily pressed into a mold of the desired form.

The wires B B aid in preventing the displacement of the tubes in case of their being cracked by the heat or otherwise. If desired, the tubes may be cut into the required lengths or sections after being strung on the wires.

I am aware that sectional pieces of glass have been used in the construction of reflectors, and such I do not broadly claim.

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

1. A reflector consisting of silvered glass tubes, a foundation, and fastening-wires, all substantially as described.

2. A reflector consisting of the silvered glass tubes A, the foundation C, and the wires B, securing said tubes together and to the foundation, substantially as described.

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Witnesses:

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