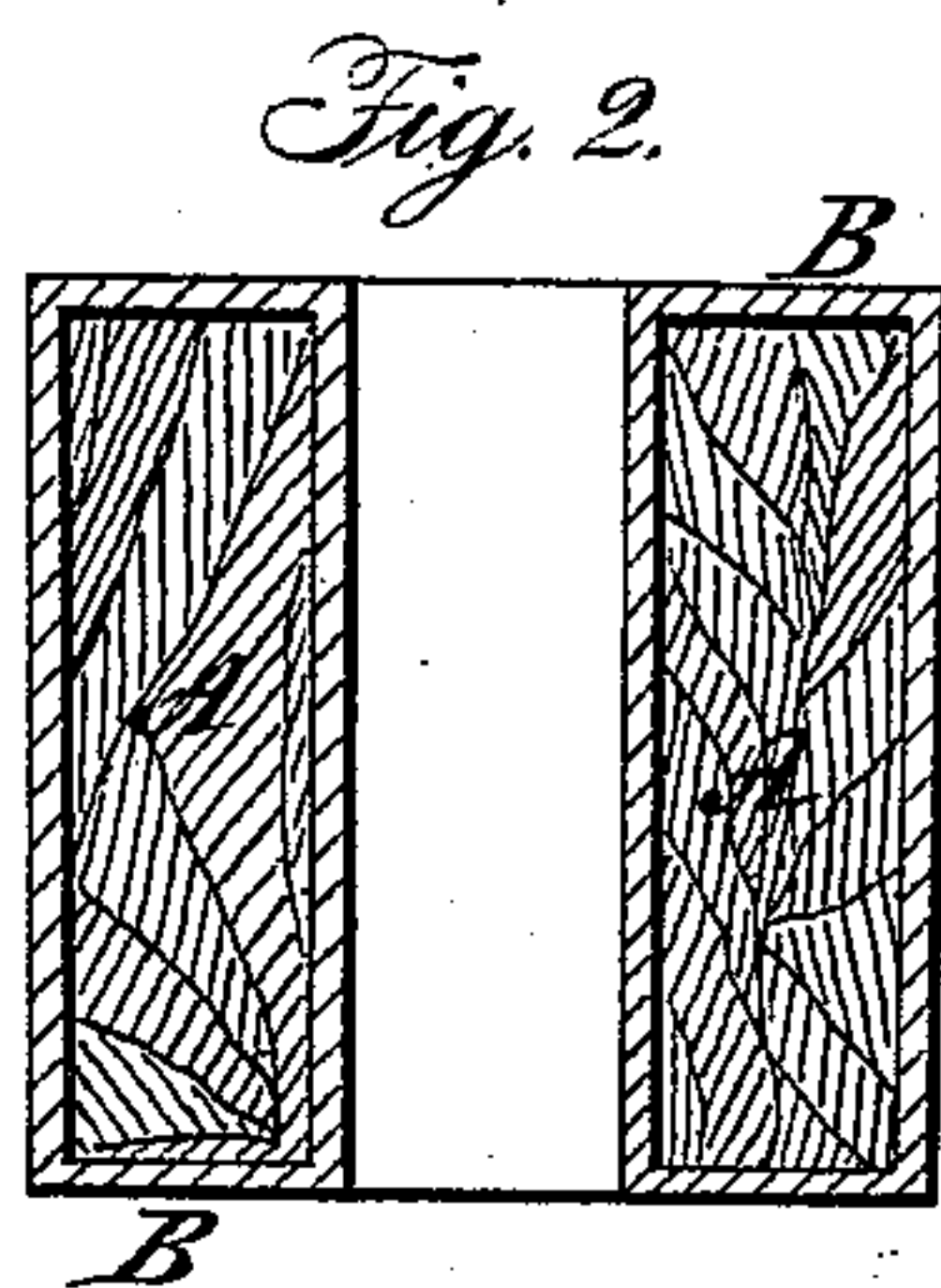
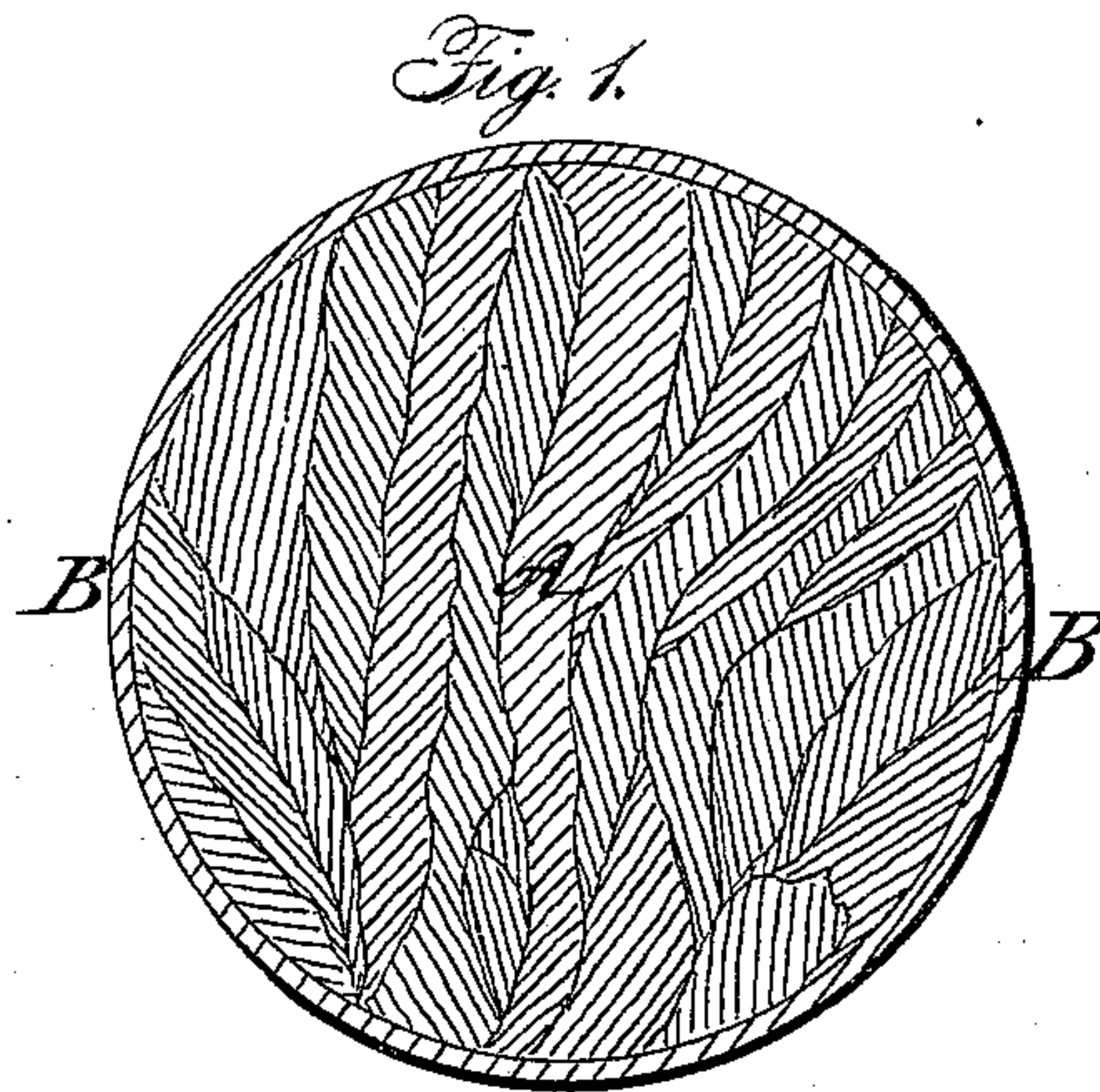


A. R. DAVIS.
Coating Sponge with Composition.

No. 38,813.

Patented June 9, 1863.



Witnesses:

Robert E. Schenck
Norman W. Fleas

Inventor:

Abbot R. Davis

UNITED STATES PATENT OFFICE.

ABBOT R. DAVIS, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN THE MANUFACTURE OF BALLS, SPRINGS, &c.

Specification forming part of Letters Patent No. 38,813, dated June 9, 1863.

To all whom it may concern:

Be it known that I, ABBOT R. DAVIS, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new method of treating sponge, whereby it can be made useful for many purposes, such as springs, bat-balls, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a section through a bat-ball constructed according to my new process; Fig. 2, a section through a spring constructed in a similar manner.

The object of my invention is to utilize sponge in the construction of articles of various manufacture, so that much economy may be derived by making it a substitute in part for india-rubber; and it consists in a new method of treating the sponge, which will now be more particularly described.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

The sponge is made to assume any desired form by compression in a suitable mold or other contrivance, and while in this state is subjected to heat, (either natural or artificial,) whereby it is thoroughly dried or baked. After being removed from the mold it retains the form there given to it, and possesses a considerable degree of resiliency. In order to protect it from moisture, which would materially injure it by lessening the cohesion of its parts, I cover its exterior surface with a coating of india-rubber or other water-proof material, as seen in the drawings, in which A represents the sponge after it is removed from the mold; B, the coating of india-rubber.

Various kinds of sponge may be employed, some being better adapted for special purposes than others. The coarser qualities, where the fiber is large and strong, are better suited for articles that are required to sustain a great pressure, such as springs, &c. When used for springs it is necessary to compress it more compactly, and subject it to a greater degree of heat—say from 200° to 300° Fahrenheit, or as much as it will bear without burning the fiber. When used for bat-balls, if not of sufficient weight, it may be made heavier by inserting any heavy substance in the center of the sponge, or a suitable portion of white lead or other heavy material may be mixed with the exterior coating of india-rubber.

I have spoken of my invention as particularly applicable to springs, bat-balls, &c. It is obvious, however, that on account of the cheapness and lightness of sponge (especially the coarser qualities) it may be made available for a variety of other purposes when treated in the manner above described.

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

1. Compressing the sponge into any desired form and drying or baking it in the manner substantially as set forth.
2. Covering the sponge, when so treated, with india-rubber or other water-proof material, in the manner and for the purpose substantially as described.

ABBOT R. DAVIS.

Witnesses:

NORMAN W. STEARNS,
P. E. TESCHEMACHER.