

No. 754,053.

PATENTED MAR. 8, 1904.

S. G. DERHAM.
FILTERING MATERIAL.
APPLICATION FILED MAR. 2, 1903.

NO MODEL.

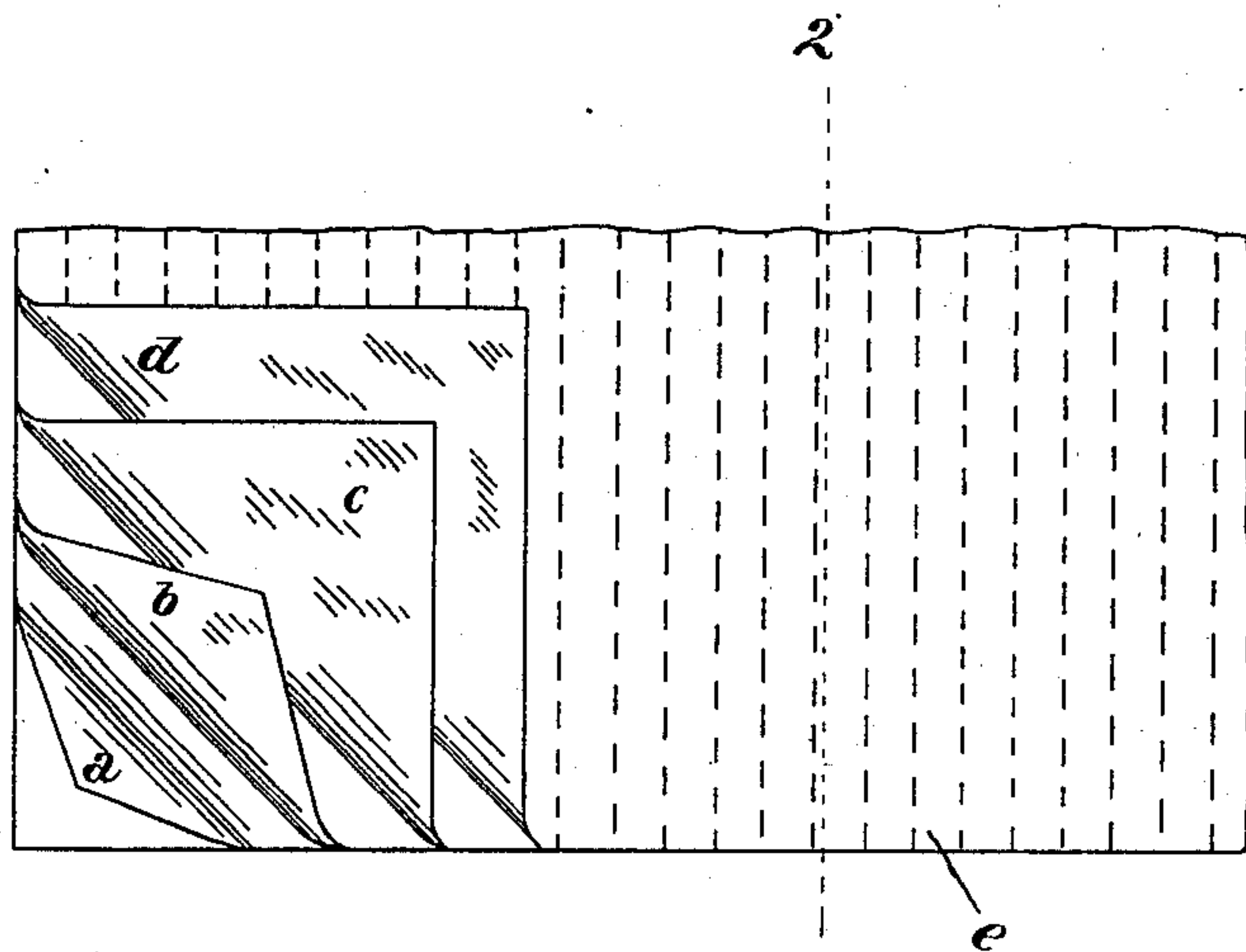


Fig. 1. 2. e

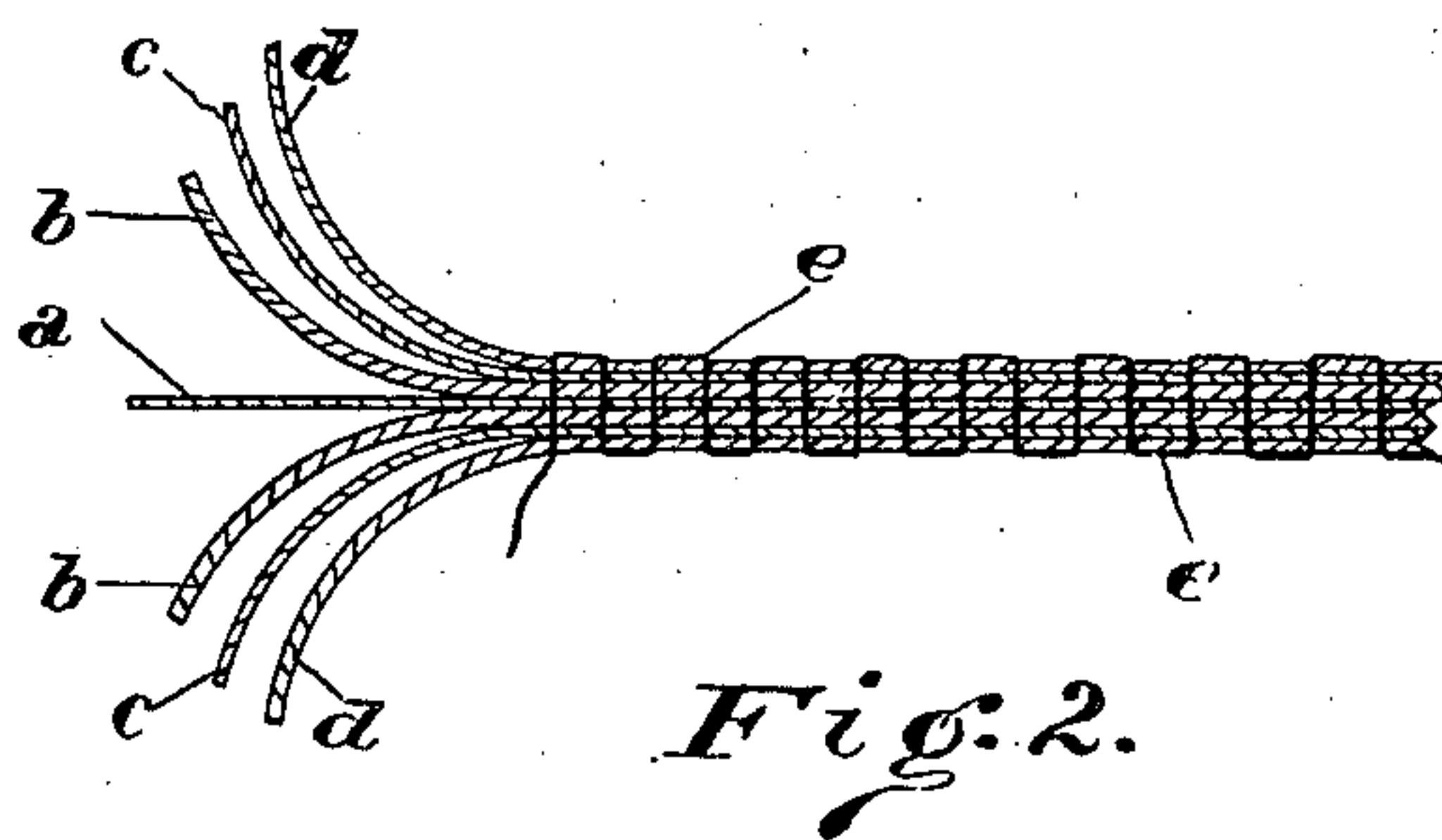


Fig. 2.

Witnesses.
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SAMUEL G. DERHAM, OF CINCINNATI, OHIO.

FILTERING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 754,053, dated March 8, 1904.

Application filed March 2, 1903. Serial No. 145,805. (No specimens.)

To all whom it may concern:

Be it known that I, SAMUEL G. DERHAM, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Filtering Material, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in the formation of filtering fabrics for use more particularly in bag-filters; and the purpose of the invention is to provide a fabric of filtering paper and cloth in which the paper material shall be so treated and protected that it shall become as strong and pliable as the cloth.

Heretofore filtering material for bag-filters has been constructed of layers of flannel or other woven fabric with soft fibrous paper interposed between the cloth layers and the whole stitched or quilted together to form a fabric for filters; but the paper when the filter is not in use becomes hard and brittle and soon breaks up and its efficacy is very largely destroyed.

My invention therefore consists in interposing a layer of cotton wadding or batting on either or both sides of the paper material, with which I have found that even after the filtering fabric has been repeatedly used and dried the paper still continues tough and pliable. The layer or layers of cotton soak into and coheres with the paper in such a way that a strong tough material is the result without in any way detracting from the efficacy of the paper as a filtering medium.

In the drawings, Figure 1 shows a portion of my fabric with the various layers turned up at one corner. Fig. 2 is a section of same on lines 2 2 of Fig. 1.

The fabric is made up of alternate layers of fibrous paper and of flannel or some other suitable textile fabric. The innermost layer *a* is preferably of canton-flannel, with the nap

inside. Then two layers of fibrous paper *b b*, such as blotting-paper, are provided, one on each side of the central layer of cloth. Then a thin layer or sheet of cotton wadding or batting *c c* is placed on each sheet of paper, and then follows on each side an external layer *d d* of textile fabric, such as flannel. The seven layers are then stitched or quilted together with parallel lines of stitching *e e* and the fabric is complete.

I have described the fabric as shown in the drawings; but of course it will be understood that instead of seven layers any suitable number of alternate layers of textile fabric and filtering-paper with cotton-batting contiguous either or both faces of the filtering-paper may be employed. My improvements consist, essentially, in the use of cotton batting or wadding in connection with the filtering-paper, and each sheet of filtering-paper may be interposed between two sheets of cotton-wadding, or only one sheet of cotton-wadding may be used with each sheet of paper.

The filtering fabric thus formed can be washed and used over and over again without detriment, and the effect of the cotton-wadding is such that the filtering-paper remains soft and pliable and does not lose its cohesion with use.

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

As an improved article of manufacture, a filtering fabric composed of a plurality of alternate layers of textile fabric, and filtering-paper, with an intermediate layer of cotton-wadding contiguous the filtering-paper, the whole united and bound together by stitches over the entire face of the fabric, substantially as described.

SAMUEL G. DERHAM.

Witnesses;

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