No. 875,687. PATENTED JAN. 7, 1908.

H. W. BLAISDELL & H. A. BROOKS.

FILTER LEAF.

APPLICATION FILED MAY 20, 1907.

Fig 1

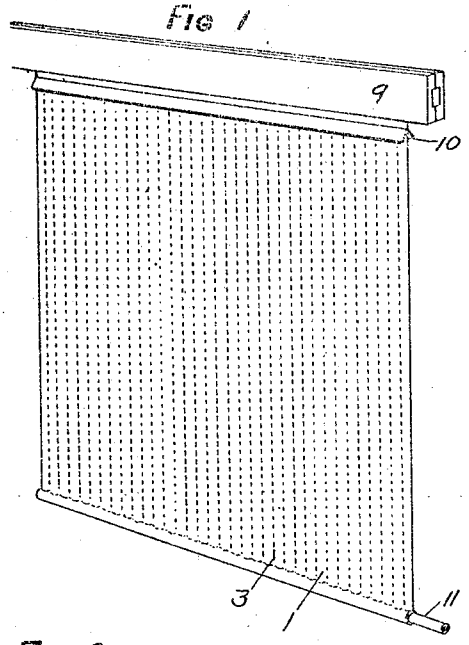


Fig 2

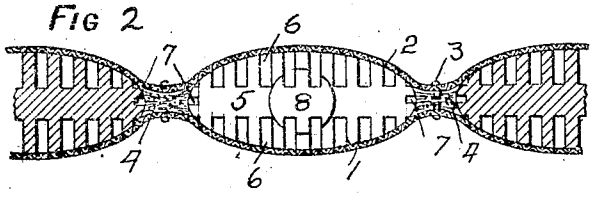
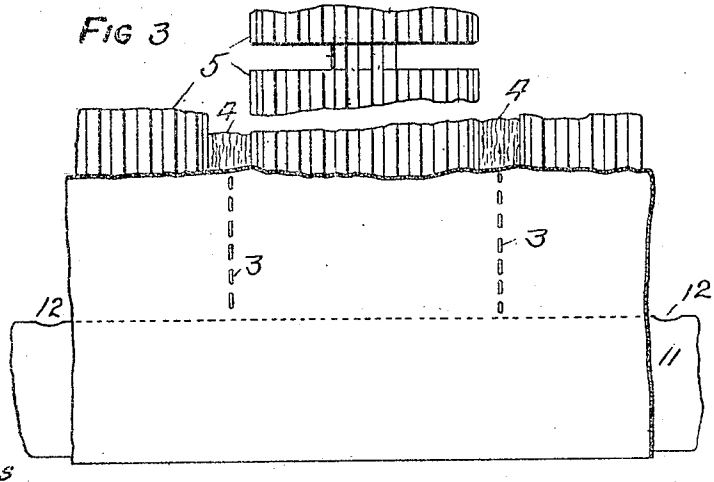


Fig 3



Witnesses

Edna M. Newcomer.

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UNITED STATES PATENT OFFICE.

HIRAM W. BLAISDELL AND HARRY A. BROOKS, OF LOS ANGELES, CALIFORNIA.

FILTER-LEAF.

No. 875,687. Specification of Letters Patent. Patented Jan. 7, 1908.

Application filed May 20, 1907. Serial No. 374,775.

To all whom it may concern:

Be it known that we, HIRAM W. BLAISDELL, a citizen of the United States of America, and HARRY A. BROOKS, a subject of the King of Great Britain, both residing at Los Angeles, California, have invented a certain new and useful Filter-Leaf; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a filter leaf and has for its object to provide an apparatus of this class wherein the passageways for the filtrate shall be of sufficient capacity so that the filtration shall be rapid and uniform ovet the entire surface of the leaf.

It is a further object to provide a leaf wherein the penetration of the fabrics by the fluid along the lines of fastenings holding said fabrics toward each other shall not be less than at other portions of the leaf.

With these, and other, objects in view the invention may be embodied in the construction herein described and illustrated in the accompanying sheet of drawings, in which

Figure 1 is a perspective view of the filter leaf; Fig. 2 is an enlarged horizontal section through a portion of the filtering fabric, one of the distenders being shown in plan. Fig. 3 is an elevation of a portion of the lower edge of the leaf.

Referring to the drawings, reference numerals 1 and 2 designate sheets of filtering fabric which are held toward each other at intervals by lines of sewing 3, there being interposed between them at these places strips of foraminous material 4. In each of the spaces included by the filtering fabric and said strips of foraminous material, are located a plurality of distenders 5, having at their sides grooves 6, and at their edges grooves 7. Distenders 5 are formed in sections of any convenient length, each section being separated from the major portion of the adjoining section by a projection 8, formed on or attached to its end. The upper edge of the leaf is supported by a rail 9 below which are deflecting wings 10. A pipe 11 having perforations 12 is inclosed by the junction of the lower edges of the filtering fabrics 1 and 2.

The mode of operation of this invention is as follows: The leaf being supported in any receptacle, the contents of which it is desired to filter, and pressure being used upon said contents, the liquid portions of said contents pass through fabrics 1 and 2 into the grooves 6 of the distenders and into the foraminous material 4 and grooves 7 of said distenders. Flowing along said grooves the liquid enters the spaces between the ends of the distenders and hence it is distributed upon the grooves of the succeeding distenders, flowing finally to the pipe 11, whence it is discharged from the filter leaf.

When it is desired to remove the accumulation or residuum from the outside of the leaf, fluid such as air or water under pressure, is introduced into the pipe 11 and passing through the grooves in the reverse direction as just described, it passes through the filtering fabric and removes said residuum from the surface of the filter leaf.

1. In a filter leaf sheets of filtering fabric, strips of foraminous material interposed between said sheets, fastenings uniting said filtering fabrics and said strips of foraminous material, means between said strips to hold said filtering fabrics from each other between said fastenings and passageways adjacent to said means.

2. In a filter leaf sheets of filtering fabric, strips of foraminous material therebetween, fastening uniting said fabrics and said strips and distenders having passageways therein between said sheets of filtering fabric.

3. In a filter leaf sheets of filtering fabric, strips of foraminous material therebetween, fastenings uniting said fabrics and said strips, distenders having passageways therein between said sheets of filtering fabric and means for separating the end of one distender from the major part of the adjacent distender.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 27th day of April A. D. 1907.

HIRAM W. BLAISDELL.
HARRY A. BROOKS.

Witnesses:
JOHN F. CODIC,
EDNA M. NEWCOMER.