(No Model.)

E. W. CARTER.

FILTERING PAPER.

No. 324,750. Patented Aug. 18, 1885.

Fig. 1.

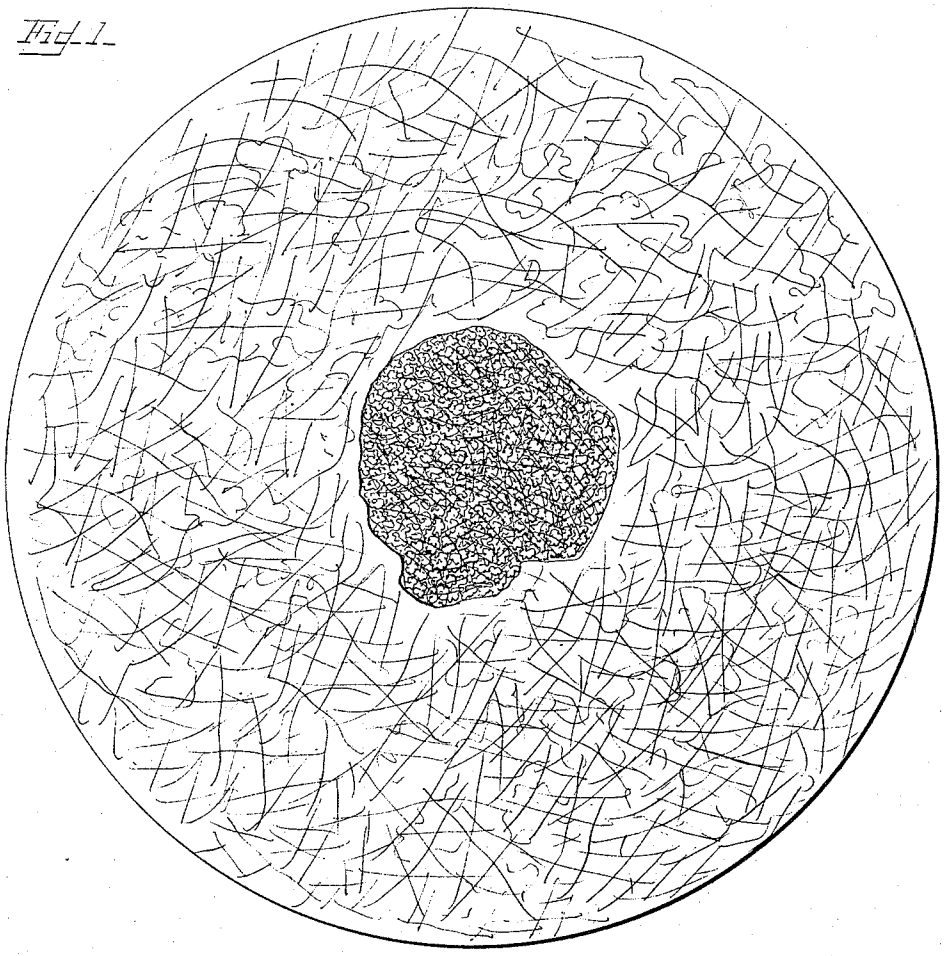

Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

EZRA W. CARTER, OF COHOES, NEW YORK.

FILTERING-PAPER.

SPECIFICATION forming part of Letters Patent No. 324,750, dated August 18, 1885.

Application filed March 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, EZRA W. CARTER, of Cohoes, county of Albany, and State of New York, have invented a new and useful Improvement in Filtering-Paper, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a paper for filtering purposes, made from sponge combined with a fibrous material—such as cotton, hemp, or flax, or other suitable fiber adapted to unite and bind together the minutely-divided parts of the sponge forming the body or filtering substance of the paper; and it consists in a filtering-paper composed of sponge and a suitable fibrous material for uniting or binding together the portions of sponge, as a new article of manufacture, as hereinafter explained.

In the accompanying drawings, Figure 1 represents a plan view of a sheet of filtering-paper with the surface partly broken away to show the materials employed, and Fig. 2 a section through the same.

For the manufacture of my improved filtering-paper I employ sponge minutely divided by any suitable means in such manner as to adapt it to be thoroughly and easily mixed and incorporated in the vat or other suitable receptacle with pulp made from cotton, flax, hemp, or other fibrous material, and prepared in any usual or preferred manner for the manufacture of paper. The sponge may be mixed with the fibrous pulp in the vat or tank from which the pulp is fed directly to the paper-making machine, or in any other suitable vessel or receptacle therefor, care being exercised to thoroughly and evenly mix and incorporate the finely-divided particles of sponge with the pulp in such manner as that when the material is fed to the pans or sieves the fibrous material shall serve to bind or hold the particles of sponge together in the desired sheet form, after which the material is treated as in the ordinary manner of preparing filtering-paper.

The porous nature of the sponge and it adaptation to filtering purposes are too wel understood and appreciated to require expla nation, and when the sponge is brought int sheet form, with its minutely-divided portion essential for that purpose, assisted by th fibrous material enveloping and uniting suc portions, it has been found in practice to con stitute an excellent paper, admirably adapte to filtering purposes, and greatly superior fo such purposes to the ordinary filtering-pape now in general use.

It will be obvious that the pulp may be pre pared and fed to the paper-making machiner in any usual manner, so long as it is of such character as to thoroughly unite and bind to gether the particles or minutely-divided por tions of sponge, and the latter is so mixed and incorporated with the fibrous pulp as to form the body of the paper.

For the purpose of strengthening the paper thus formed from sponge mixed with fibrous pulp, I prefer to add to the pulp, just before it is run out upon the sieves or forming-pans, or while in the latter, loose cut thread or other fiber, by sprinkling the same on or mixing it loosely with the pulp; or, if preferred, such fiber may be applied only to the central portions of the sheets in a manner described in Letters Patent No. 311,223, granted to myself and others January 27, 1885. This serves to effectually bind the loose particles of sponge together, and to prevent the bursting or giving way of the paper in use.

Having now described my invention, I claim as new—

A paper for filtering purposes made from sponge and fibrous pulp, and having loose cut thread or similar fiber mixed therewith, for strengthening the same, substantially as described.

In testimony whereof I have hereunto set my hand this 7th day of March, A. D. 1885.

EZRA W. CARTER.

Witnesses:

HENRY A. STRONG,

HENRY F. WEBB.