

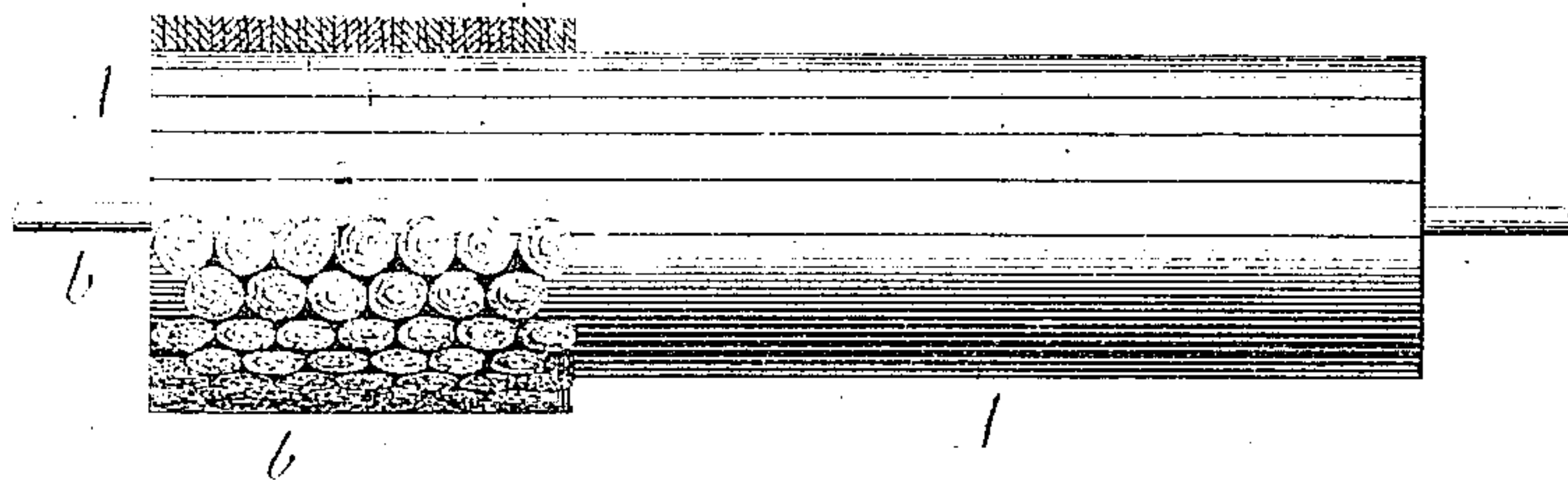
No. 622,340.

Patented Apr. 4, 1899.

J. A. FISHER & F. WESCO.  
ROLL FOR PAPER MAKING MACHINES.

(Application filed Oct. 7, 1898.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN ABSON FISHER AND FRANK WESCO, OF ELKHART, INDIANA.

## ROLL FOR PAPER-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 622,340, dated April 4, 1899.

Application filed October 7, 1898. Serial No. 692,878. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN ABSON FISHER and FRANK WESCO, citizens of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Rolls for Paper-Making Machines, of which the following is a specification.

This invention relates to improvements in rolls for paper-making machines and is directed more particularly to the class of such devices which are known in the art as "couch-rolls," or the rolls which are commonly employed to run over the cylinder or wire on which the paper is made and press the felt, on which the paper is removed, closely against the forming-cylinder.

Couch-rolls are constructed to have a yielding surface and are generally built up of spiders, which are mounted on a shaft, and of iron or wooden staves for the periphery. The yielding surface is obtained by covering the periphery of the roll with felt, sponge, or rubber. In employing sponge for this purpose it is usually the practice to nail the sponge in bunches onto the staves, and after thoroughly wetting the roll it is exposed to a low temperature and frozen, after which the periphery is turned down in a lathe. This method is, however, objectionable, as portions of the periphery will be hard while others will be soft, and couches so made are unsatisfactory in that the pressure is applied unevenly.

Our invention, which is designed to remedy these defects, consists in providing the periphery of the couch-roll with a yielding surface formed of rolls of sponge placed endwise against the staves, the rolls being offset from each other and secured by nailing or otherwise and afterward trimmed to the desired thickness.

The sponge rolls, which in the drawing are lettered *b b*, are formed from strips of sponge cut to about one and three-fourths inches in width and in lengths which vary according to the size of the sponges. The small pieces and trimmings of sponge are placed on one end of a strip and the whole tightly rolled. The end of the roll which is next to the staves is trimmed evenly, and the complete roll is then secured to the staves *A* by brass or copper nails.

When the periphery is covered, a sharp knife is employed to trim the surface evenly, or, if desired, to reduce the thickness of the covering.

Our improved roll is of uniform thickness, is free from hard and soft spots, and is durable. The method employed by us can be carried into effect by persons not especially skilled in the art. Hence the rolls may be cheaply produced.

We claim as our invention—

1. A roll for paper-making machines having a yielding surface formed of a plurality of compactly-rolled strips of the described material presented endwise.

2. A couch-roll for paper-making machines having a yielding surface formed of compactly-rolled strips of sponge, said sponge rolls being presented endwise and arranged in offset relation, and nailed or otherwise secured to the periphery of the couch-roll, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

J. ABSON FISHER.  
FRANK WESCO.

Witnesses:

CHAS. OGLE,  
C. H. NIVES.