J. M. BRIGGS, J. F. GREENE, & J. RADIKIN.

SLASHERS.

Patented April 24, 1877.

No. 189,838.

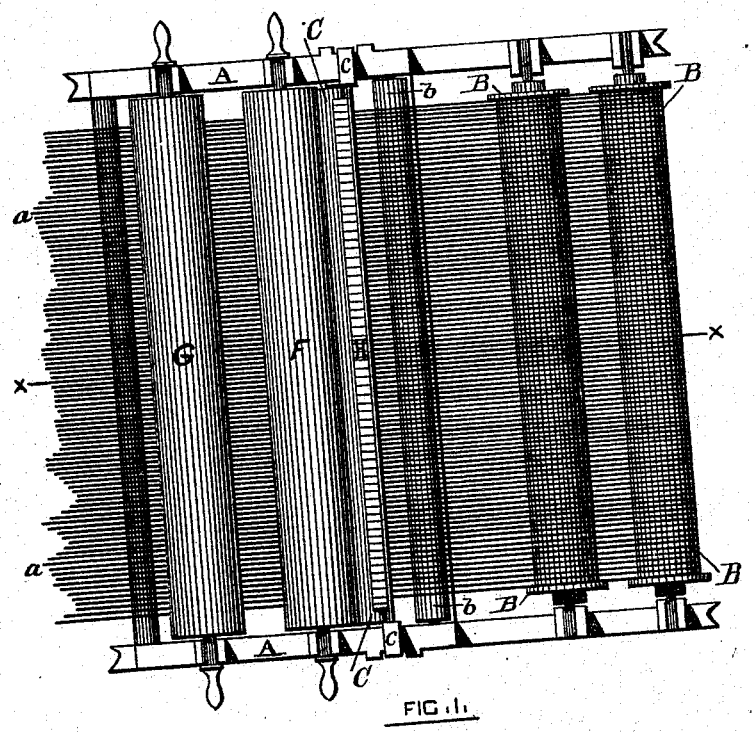

FIG. 1.

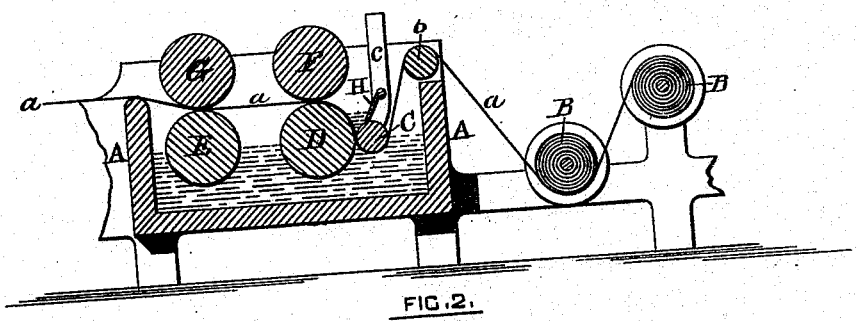

FIG. 2.

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IMPROVEMENT IN SLASHERS.

Specification forming part of Letters Patent No. **189,838**, dated April 24, 1877; application filed January 13, 1877.

To all whom it may concern:

Be it known that we, JOSEPH M. BRIGGS, JOHN F. GREENE, and JAMES RADIKIN, all of the city and county of Providence and State of Rhode Island, have invented a new and useful Improvement in Slashers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

In the sizing of warps in "slashers," particularly when corn-starch is used as a sizing material, trouble is sometimes experienced in thoroughly and uniformly performing the work, owing to a foam which collects between the immersing-roll and the front of the size-box, producing what are known as "soft places" in the warp. Trouble is also experienced from the adherence to the yarn of the sediment of the size and the particles of film which form on the size when it is allowed to stand without use for a short time.

The object of our invention is to produce better warps by obviating those difficulties, which we accomplish by the use of what may be termed a "flash-board," as hereinafter described.

Referring to the drawing, Figure 1 represents a top view of that portion of a slasher to which the sizing operation is confined. Fig. 2 represents a vertical section of the same on line *x x*.

The operation of sizing yarns for warps is well known; but, for the purpose of illustrating our improvement, a short description thereof is subjoined.

The size-box A being furnished with the requisite amount of sizing material, the yarn *a* is delivered to it, over the roll *b*, from the beams B, and passes through the size under the immersing-roll C, which is so arranged, by means of the arms *c* and suitable mechanism, as to be raised or lowered, as desired, for the proper immersion of the yarn. The yarn, after going through the size, passes onward between the carrying-rolls D E and squeezing-rolls F G, onto the drying drums or cylinders.

In the slasher, as at present constructed, a certain amount of size, in excess of that which finally adheres to the warp, is carried up by the yarn and rolls, and is shed off the face of the roll D, from which it flows in a frothy condition back over the roll C, covering with foam the size in that part of the box A where the yarn first enters.

Now, our improvement consists in the use of a flash-board, H, pivoted at each end, on its upper edge, to the arms *c*, and extending about the length of the immersing-roll C, its lower edge resting thereon.

This board is capable of free movement; but when the slasher is running it occupies a position, as shown in the drawing, and operates to prevent the foam above mentioned from passing back over the roll C, holding the said foam, together with a certain quantity of size, between itself and the roll D, as shown in Fig. 2.

This body of foam and size flows rapidly off toward the sides of the box, and passes into the main body of size at the ends of the rolls, and this rapid flow operates to free the yarn of size-sediment and particles of film, which, without the use of the board, attach themselves to the yarn. The foam being prevented from passing back over the roll C into the front of the box, the yarn enters clear size, instead of being obliged to pass through the foam, as formerly, and the practical results are thoroughly and uniformly sized warps.

By the use of our improvement we obviate the imperfections in the warps called soft places, where the warp is not sufficiently sized, and which cause great trouble in weaving. These imperfections more frequently arise in the employment of corn-starch than in the employment of potato-starch, both of which are in general use for making size, but the former being less expensive.

We also find a further result of this our improvement is, that a thinner body of size may be used with equally good effects.

What we claim, and desire to secure by Letters Patent, is—

In slashers for sizing cotton-yarn for warps to be used in weaving, a flash-board, H, in combination with the immersing-roll C, whereby the excess of size, which falls back from the yarn, is deflected toward the ends of the immersing-roll, substantially as described, and for the purpose specified.

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