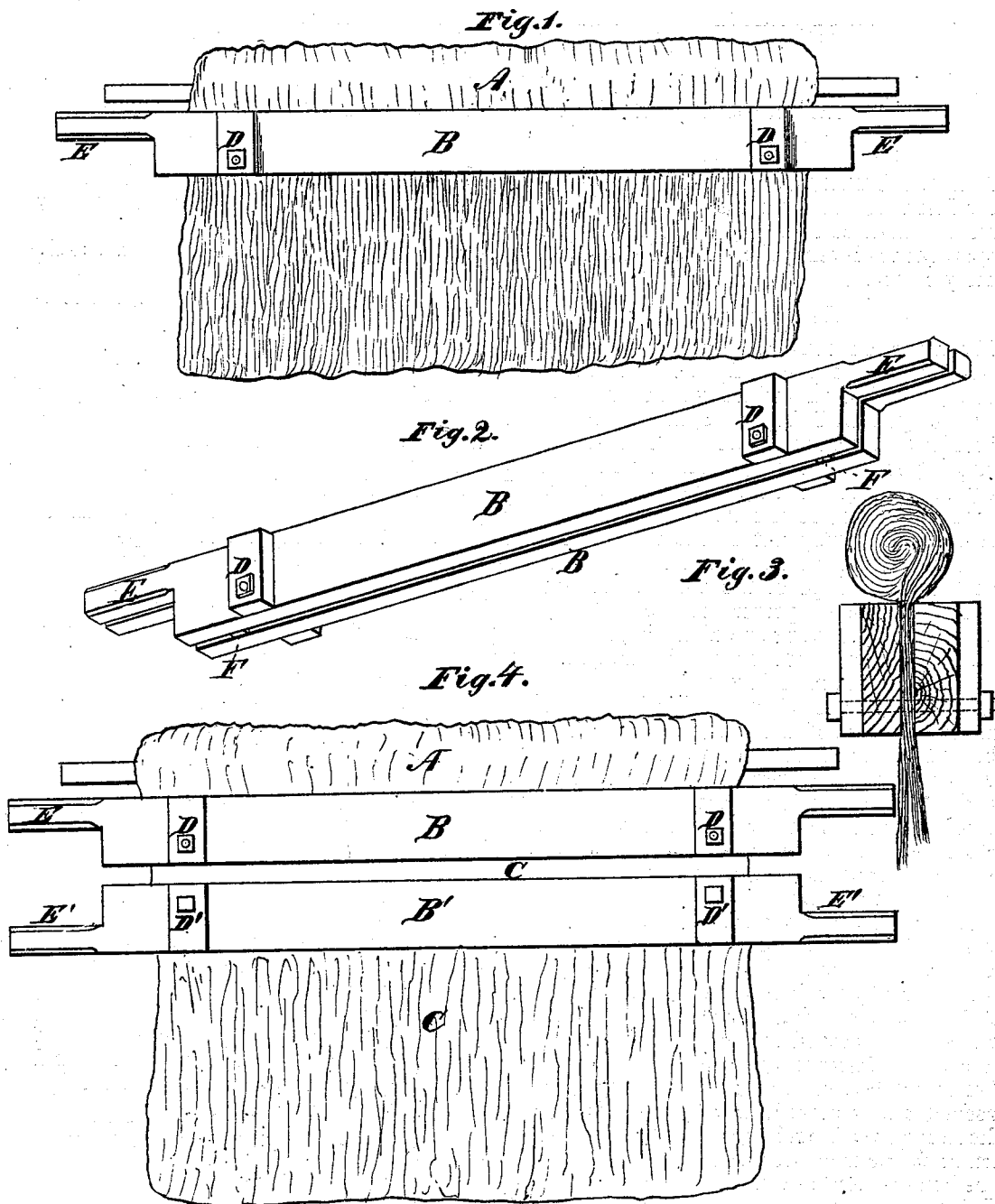


T. SHEARD.

Improvement in Apparatus for Dyeing Yarns.

No. 124,292.

Patented March 5, 1872.



Witnesses:
Watt T. Loomis
Sidney A. Loomis.

Inventor:
Titus Sheard

UNITED STATES PATENT OFFICE

TITUS SHEARD, OF LITTLE FALLS, NEW YORK.

IMPROVEMENT IN APPARATUS FOR DYEING YARN.

Specification forming part of Letters Patent No. 124,292, dated March 5, 1872.

I, TITUS SHEARD, of the village of Little Falls, Herkimer county, and State of New York, have invented certain Improvements in the Apparatus for Dyeing Yarns and Fabrics in a variety of colors.

Description.

My invention consists, first, of a pair of clamps, of wood or metal, B, as shown in Figures 2 and 3, between which yarn or any fabric to be dyed, as C, Figs. 1, 3, and 4, is compressed by means of the screws D or other device so tightly that the dye cannot penetrate the yarn or fabric above the edge of the clamps B, such clamps to be so formed that the handles or ends E may rest on the edge of the kettle or vat or other support in such manner that the lower edge of the clamps between which the yarn is compressed shall be suspended in the kettle or vat some distance below its upper edge, in order to reach the dye and allow room for ebullition below the upper edge. Second, of the use of the blocks F pressed against the edge of the mass of the yarn or fabric between the clamps, by means of which the edges are also protected from the dye. Third, of the use of two or more sets of clamps, the second set to be applied in reversed form for the second dyeing before the removal of first pair, in order to secure the threads in the same position relative to each other, while the upper part is secured and turned down into the second dye-kettle for the second color. To accomplish this result the clamps are hung on parallel bars by the handles E, with the fabric C, already colored, hanging below. The clamps B' are carried to the desired position and securely fastened by means of the screws D' or other device. The clamps B are then loosened and removed, the portion already colored inclosed in its bag or cover A, and the yarn or fabric uncolored is ready, in its turn, to be immersed in the dye for the second color.

It is necessary that the screws, screw-heads,

and washers, or any other device for fastening, if of metal, should be made of or protected by a metal which will not corrode in the acids and alkalies used in the dye; and it is desirable to have the bolts pass through and be in contact with the yarn or fabric, so that the compression may be equal throughout.

Description of Accompanying Drawing.

Figure 1 is a side elevation, showing the yarn or fabric compressed between the clamps, with the handles or ends for resting on the kettle or vat. Fig. 2 is a perspective view of the clamps. Fig. 3 is a sectional view of the same, as in 1. Fig. 4 is a side elevation, showing the manner of applying the second pair of clamps.

Claims.

I claim—

1. The use of two or more sets of clamps, used successively, the second applied before the first is removed, so that the threads of yarn or fabrics may be held in exactly the same relative position, while the other part is inserted in the second dye-kettle or vat.
2. The use of the blocks F, of wood, rubber, or other material, by means of which the dye is prevented from entering the ends of the clamps and coloring the yarn higher than desired.
3. The form of the clamps, as shown in the drawing, by which the lower edge, where the yarn is compressed, is dropped below the top of the kettle or vat and immersed in the dye, while it is kept in the same position by resting the handles upon the edge of the kettle or vat, and the greater weight of the lower edge of the clamps keeps them in that position and immersed in the dye without causing the dye to overflow.

TITUS SHEARD.

Witnesses:

A. LOOMIS,
SIDNEY A. LOOMIS.