

T. Sampson,

Dye Tub.

No. 109059.

Patented Nov. 8. 1870.

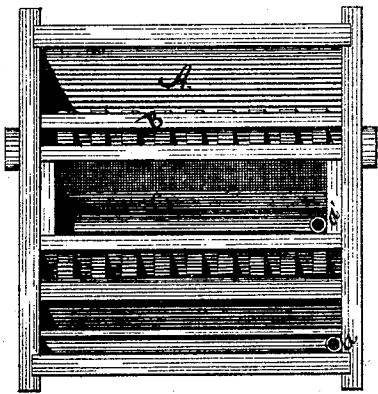


FIG. 1.

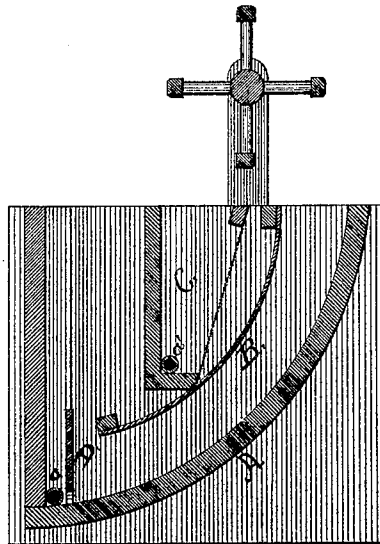


FIG. 2.

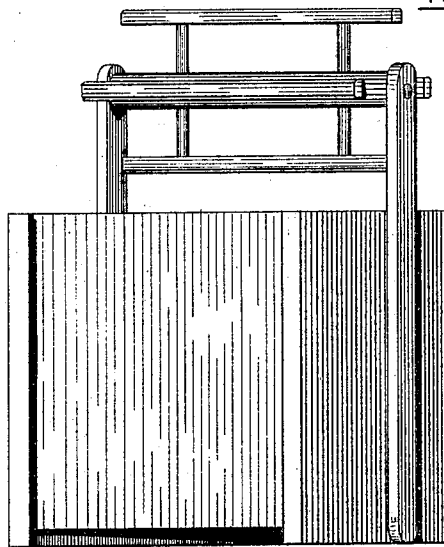


FIG. 3.

WITNESSES,

*Walter B. Vincent* -----

*John D. Wingate* -----

INVENTOR,

*Thomas Sampson* -----

# United States Patent Office.

THOMAS SAMPSON, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 109,059, dated November 8, 1870.

## IMPROVEMENT IN DYE-TUBS.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, THOMAS SAMPSON, of the city and county of Providence, in the State of Rhode Island, have invented a new and improved Dye-Tub; and I do hereby declare that the following specification, taken in connection with the drawing making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a top view, with reel removed.

Figure 2 is a cross section.

Figure 3 is an elevation, opposite corner.

The object of my invention is to so construct a dye-tub that the operation of dyeing the cloth may be more easily and at the same time more thoroughly performed, and consists in the device for that purpose hereinafter described.

The ordinary dye-tub now in use is a plain square or rectangular tub, provided with a reel and steam-pipes in a manner well understood, in which the dye is prepared and the cloth run in.

The great difficulty experienced has been the tendency of the cloth to twist and knot, thus rendering it impossible for the dye to act evenly upon all portions of it. To overcome this difficulty men are usually employed to open the cloth while in the tub by means of sticks or poles, which operation is only in a small measure effectual.

In my invention I construct the tub with its two sides and one end perpendicular, the other end and the bottom A forming a segment of a circle, as shown in fig. 2, and place above it an ordinary reel.

I provide the tub with a slatted or close partition, B, the former being preferable, extending from the

top nearly to the opposite side; and also with a compartment, C, having its side near the partition B of wire gauze, within which the dye is placed.

$\alpha$  and  $\alpha'$  are steam-pipes, running across and to the top of the tub.

The operation of my invention is as follows:

The tub being provided with the requisite amount of liquid, the end of the cloth is placed upon the reel and the reel started in the proper direction. As the cloth descends into the tub it strikes against the curved part A, which lays it in smooth folds, and prevents it from knotting or twisting in such a manner as to render less effective the action of the dye. The cloth, by the accumulated weight of the successive folds, is forced into the liquid, the partition B preventing it from coming to the surface until it has passed through to the partition D, which protects the cloth from the steam-pipe  $\alpha$ , when it is drawn up to the top and the ends of the cloth united, thus forming a continuous band, which is carried by the reel through the dye until the color is complete.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A dye-tub, having a partition, B, arranged in the manner substantially as described, for the purposes specified.

2. A dye-tub, having a partition, B, in combination with a compartment, C, the whole constructed and arranged in the manner substantially as described.

THOMAS SAMPSON.

Witnesses:

WALTER B. VINCENT,  
JOHN D. WINGATE.