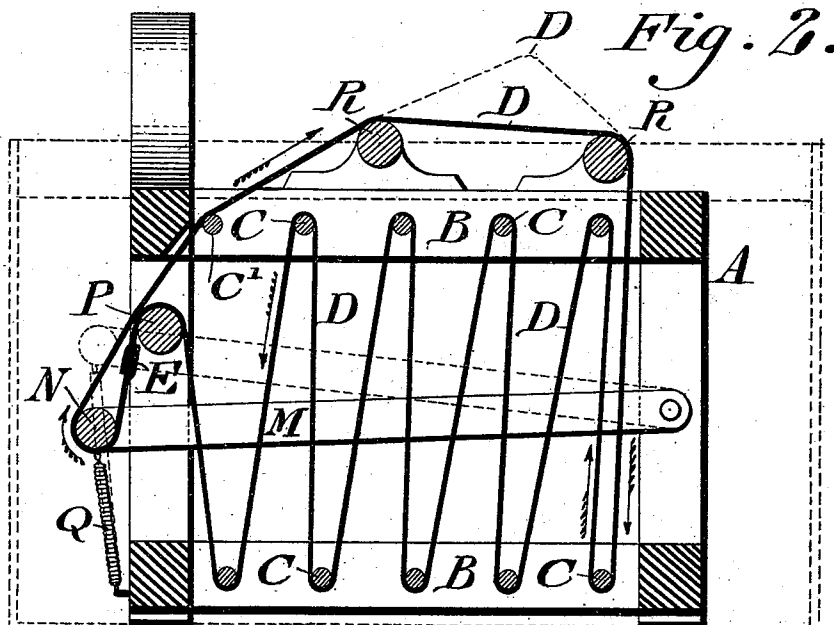
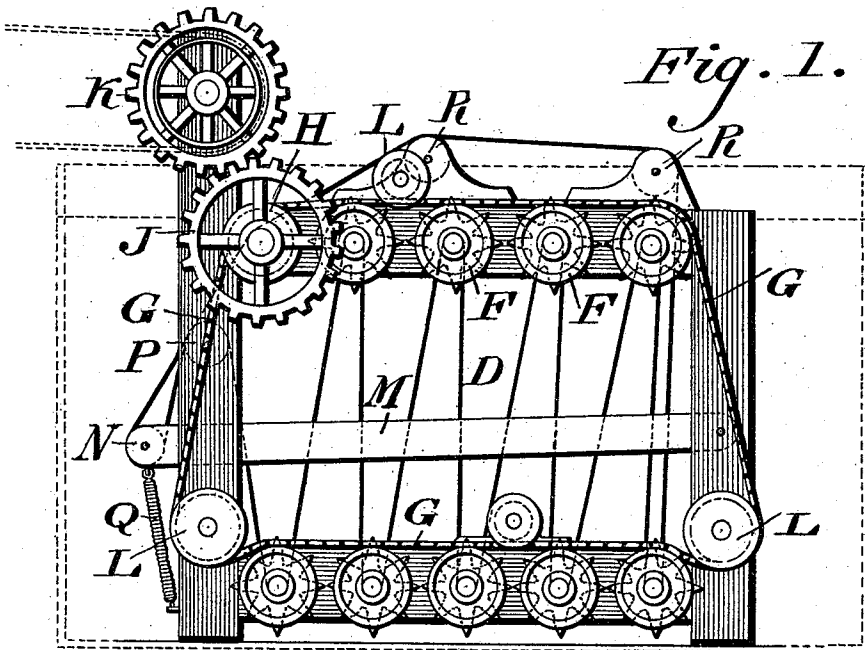


(No Model.)

E. KEUSER.
DYEING FRAME.

No. 499,170.

Patented June 6, 1893.



WITNESSES:

P. Fr. Chagles;
L. Douville.

INVENTOR

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UNITED STATES PATENT OFFICE.

EMANUEL KEUSER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
MARY KEUSER, OF SAME PLACE.

DYEING-FRAME.

SPECIFICATION forming part of Letters Patent No. 499,170, dated June 6, 1893.

Application filed October 31, 1892. Serial No. 450,525. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL KEUSER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Racks or Frames for Dyeing, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a rack for dyeing ribbons and other material, the same being constructed of a frame which is provided with means for holding the material in taut condition, and permitting the same to be examined without actual removal from the frame, or stoppage of the material in its passage through the dye, as will be hereinafter set forth.

Figure 1 represents a side elevation of a rack for dyeing embodying my invention. Fig. 2 represents a central longitudinal vertical section thereof.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings:—A designates the frame of the rack on the upper and lower longitudinal pieces B of which are mounted the rollers C, C', around which the material D is passed, the ends of said material being secured in any suitable manner, as at E. Secured to the axes of said rollers C are sprocket wheels F, around which passes the endless sprocket chain G. On the axis of the pulley C' is a pulley H, around which said chain also passes, said axis or pulley having also connected with it a gear wheel J, with which meshes the driving pulley K, to which power is imparted in any suitable manner. Pulleys L are also mounted on the frame and bear against the chain G for retaining the latter in proper position on the wheels F, and guiding the same in its motion.

M designates gravitating arms which are mounted on the uprights of the frame A, and carry at or near their outer ends the roller N. Mounted on the uprights of the frame adjacent to said roller N, is a roller P, around which and said roller N, the material D is passed. Connected with the arms are springs Q, which are also connected with the frame A, their tendency being to assist in depressing said

arms and consequently tightening the material D passed around the several rollers.

It will be seen that when the material is properly placed on the several rollers, and the frame placed in the dyeing vat, power is applied to the gearing, whereby motion is imparted to the sprocket chain and wheels, and consequently to the material, which latter is thus run through the dye and subjected to the same.

In order to provide means for inspecting the material I employ rollers R, which are elevated or mounted on the top of the frame A, so as to be above the dye, and the material is passed around said rollers so that said material emerges from the dye in its passage around said rollers R, and is thus exposed to view. Should it be desired to lift the material, in order to handle the same, the portion of the same on the rollers R is raised, the arms M yielding and permitting said raising, as indicated by the dotted lines Fig. 2. When the material is let go, the springs Q restore the arms M to their normal position, thus taking up the slack of the material, and restoring the latter to its proper tension, it being noticed that this operation is accomplished without stopping the rotation of the rollers and movement of the material.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rack for dyeing, consisting of a frame, rollers mounted on the upper and lower longitudinal pieces thereof, sprocket wheels on the axes of said rollers, a sprocket chain on said sprocket wheels, driving mechanism connected with a gear wheel on one of said roller axis, a pivoted arm with roller, and a spring connecting said arm with the frame, said parts being combined substantially as described.

2. A rack for dyeing, consisting of a frame, the rollers C mounted on the upper and lower longitudinal pieces thereof, and having sprocket wheels on their axes, a sprocket chain on said wheels, the pivoted arm M, intermediate of said upper and lower pieces having the roller N on one end, the spring Q connecting said arm with said frame, the rollers R on the upper part of the frame above the rollers

C, and the rollers L for guiding the sprocket chain, said parts being combined substantially as described.

5 3. A dyeing frame having rollers with means for operating the same mounted thereon, and additional rollers mounted on the frame above said first-named rollers, in combination with an automatic tension device consisting of a

gravitating arm which is provided with a roller, and mounted on said frame, and adapted to stretch the web, the several parts being combined substantially as described.

EMANUEL KEUSER.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.