

(No Model.)

W. A. LORIMER.  
DYEING MACHINE.

No. 412,887.

Patented Oct. 15, 1889.

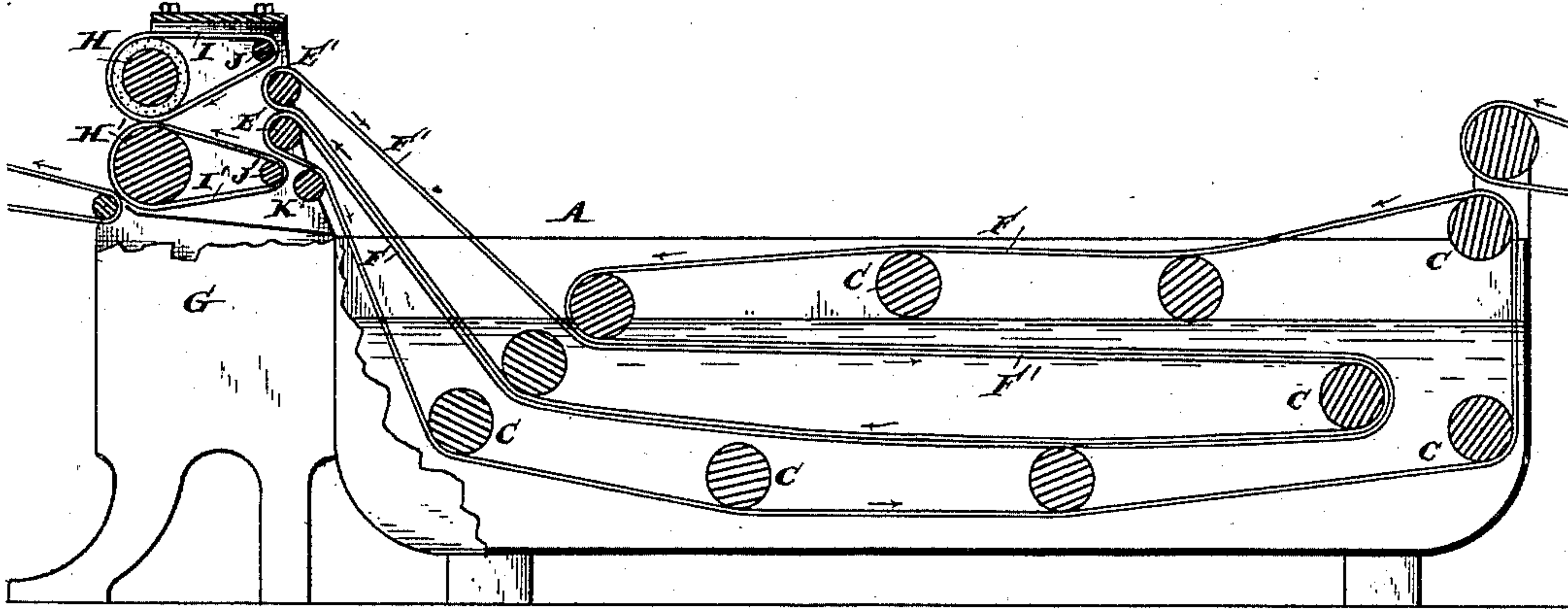


FIG. 1

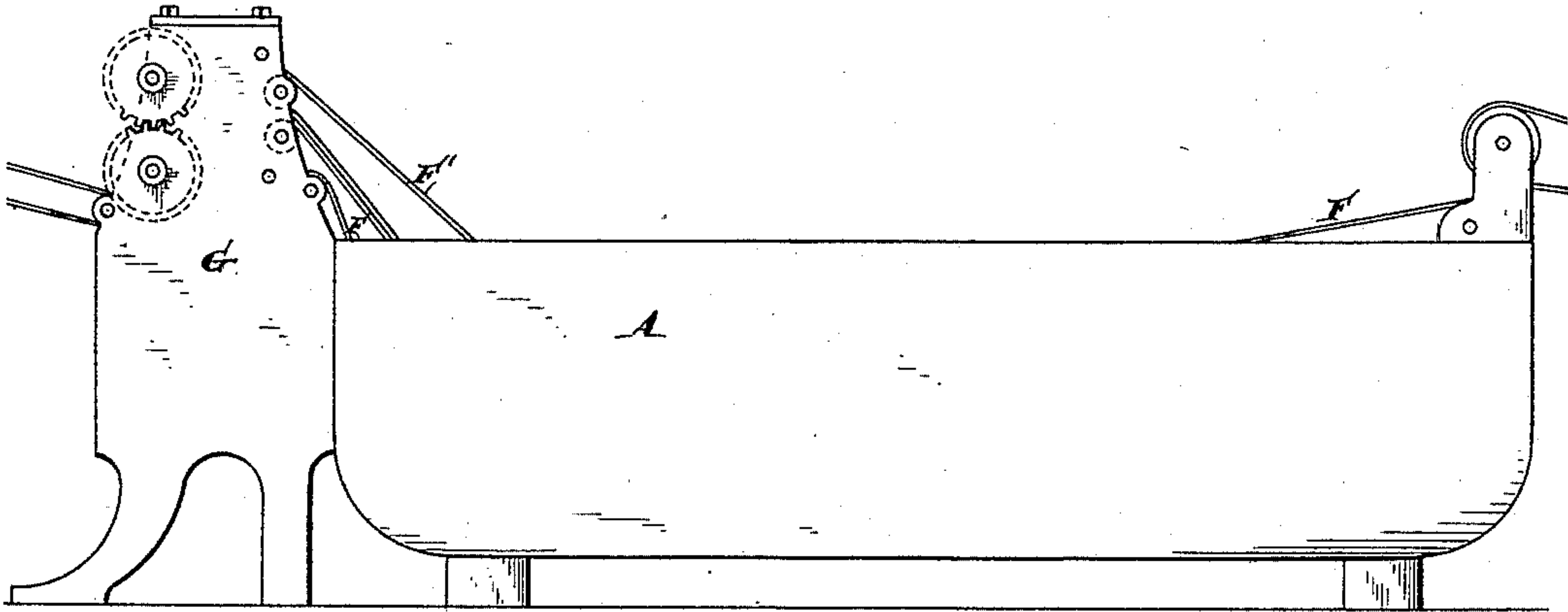


FIG. 2

WITNESSES:

Henry Dunning  
David S. Williams

INVENTOR:

Walter A. Lorimer  
By his atty  
*[Signature]*

# UNITED STATES PATENT OFFICE.

WALTER A. LORIMER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF  
ONE-HALF TO JOHN H. LORIMER, OF SAME PLACE.

## DYEING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 412,887, dated October 15, 1889.

Application filed December 26, 1888. Serial No. 294,669. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER A. LORIMER, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Dyeing-Machines, of which the following is a specification.

My invention relates to dyeing-machines in general, but more specifically to the mechanism therein for delivering the goods that have been treated to the squeeze-rolls; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

My invention is an improvement upon the dyeing and scouring machine set out in Letters Patent No. 306,695, granted October 14, 1884, to John H. Lorimer, and to that machine it is particularly adapted, though it will be apparent from the description which follows that it may be used equally well upon other machines of a similar character.

The object of my invention is to facilitate the delivery of the goods from the endless aprons or carriers to the squeeze-rolls, which I accomplish by means of two short endless aprons or carriers running about the squeeze-rolls, which act as strippers for the aprons of the dyeing-machine, prevent the loose stock or fiber from falling back into the tank, and carry it through the squeeze-rolls. The endless aprons or carriers in the machines referred to for conveying the material being treated through the dye-tank are made of heavy metal frames and could not pass between the squeeze-rollers; hence, to avoid the trouble experienced by the fiber dropping down between the delivery end of said endless aprons or traveling frames and the squeeze-rollers, I provide the short endless aprons of textile or other soft material, which may freely run between and around the squeeze-rollers and receive their motion therefrom. These short feed-aprons fill the gap which formerly existed between the guide-rollers for the long endless aprons and the squeeze-rollers. It is also evident that with this construction it is not necessary to arrange the said guide-rollers for the long aprons so close to the squeeze-rollers, as the

small endless aprons receive the material and deliver it to the squeeze-rollers.

In the drawings, Figure 1 is a longitudinal sectional view of a dyeing-machine such as above referred to embodying my improvements, and Fig. 2 is a side elevation of the same.

A is the dye vat or tank, in which are the endless aprons or carriers F F', passing about suitable rollers C and over the feed-rollers E E', by which the material treated is conducted out of the liquor to the squeeze-rolls H H'.

I I' are endless bands or aprons, preferably constructed of cloth or textile material, passing about the squeeze-rolls H H' and small idler-rollers J J', journaled close to the feed-rollers E E', but preferably below and above them, respectively, so that when the material is carried up to the squeeze-rolls by the aprons F F' these aprons I I' act as strippers and carry the material thence between the squeeze-rolls, and any loose stock or particles of fiber that there may be, instead of falling or being carried back into the tank by the apron F, are conducted between the squeezing-rolls by these aprons I I'. The squeeze-rolls H H' and the feed-rolls E E' are caused to rotate with uniform velocity by proper gearing, such as is set out in my Letters Patent above referred to, and the idler-rollers J J' are loosely journaled in the frame G.

K is a small guide-roller, which may be used to guide the apron F, so that the idler J' may be journaled below the feed-roller E and close to it. The yarn or material treated is carried through the liquor by the endless aprons F F', and thence up between the feed-rollers E E', whence it is conducted by the aprons I I' between the squeeze-rolls. As these endless aprons pass over the squeeze-rolls, and are preferably located above and below the feed-rolls E E', between which the material is delivered from the tank, it is apparent that the material will be guided and conducted positively between the squeeze-rolls, and that any loose stock or particles of fiber cannot fall down or be carried back into the tank by the apron F'.

Having now described my invention, what I



claim as new, and desire to secure by Letters Patent, is—

1. In a dyeing or scouring machine in which the material treated is carried through the liquor by suitable carriers incapable of passing between the squeeze-rollers, the combination, with said carriers, of squeeze-rollers, an idler-roller arranged close to the delivery end of said carriers, and an endless band or apron passing about said idler-roller and the lower of said squeeze-rollers, adapted to act as a stripper for the carriers of the dyeing or scouring machine.

2. In a dyeing or scouring machine in which the material to be treated is carried through the liquor by aprons or carriers incapable of passing between the squeeze-rollers, the combination, with said aprons or carriers, of squeeze-rollers, idler-rollers located close to the delivery end of said aprons or carriers and respectively above and below them, and short endless aprons passing over said squeeze and idler rollers and adapted to act as strippers for the carriers or aprons of the dyeing-machine.

3. In a dyeing or scouring machine in which the material to be treated is carried through the liquor by aprons or carriers incapable of passing between the squeeze-rollers, the combination, with said aprons or carriers, of squeeze-rollers, idler-rollers located close to the delivery end of said aprons or carriers and respectively above and below them, short endless aprons passing over said squeeze and idler rollers and adapted to act as strippers for the carriers or aprons of the dyeing-machine, and a guide-roller located near the delivery end of the lower of said carriers or aprons of the dyeing-machine to guide said apron or carrier away from the lower of said idler-rollers.

In testimony of which invention I hereunto set my hand.

WALTER A. LORIMER.

Witnesses:

E. M. BRECKINREED,  
ERNEST HOWARD HUNTER.