(No Model.) 2 Sheets—Sheet 1.

D. R. KINYON.

CLOTH STRETCHING MACHINE.

No. 534,649. Patented Feb. 26, 1895.

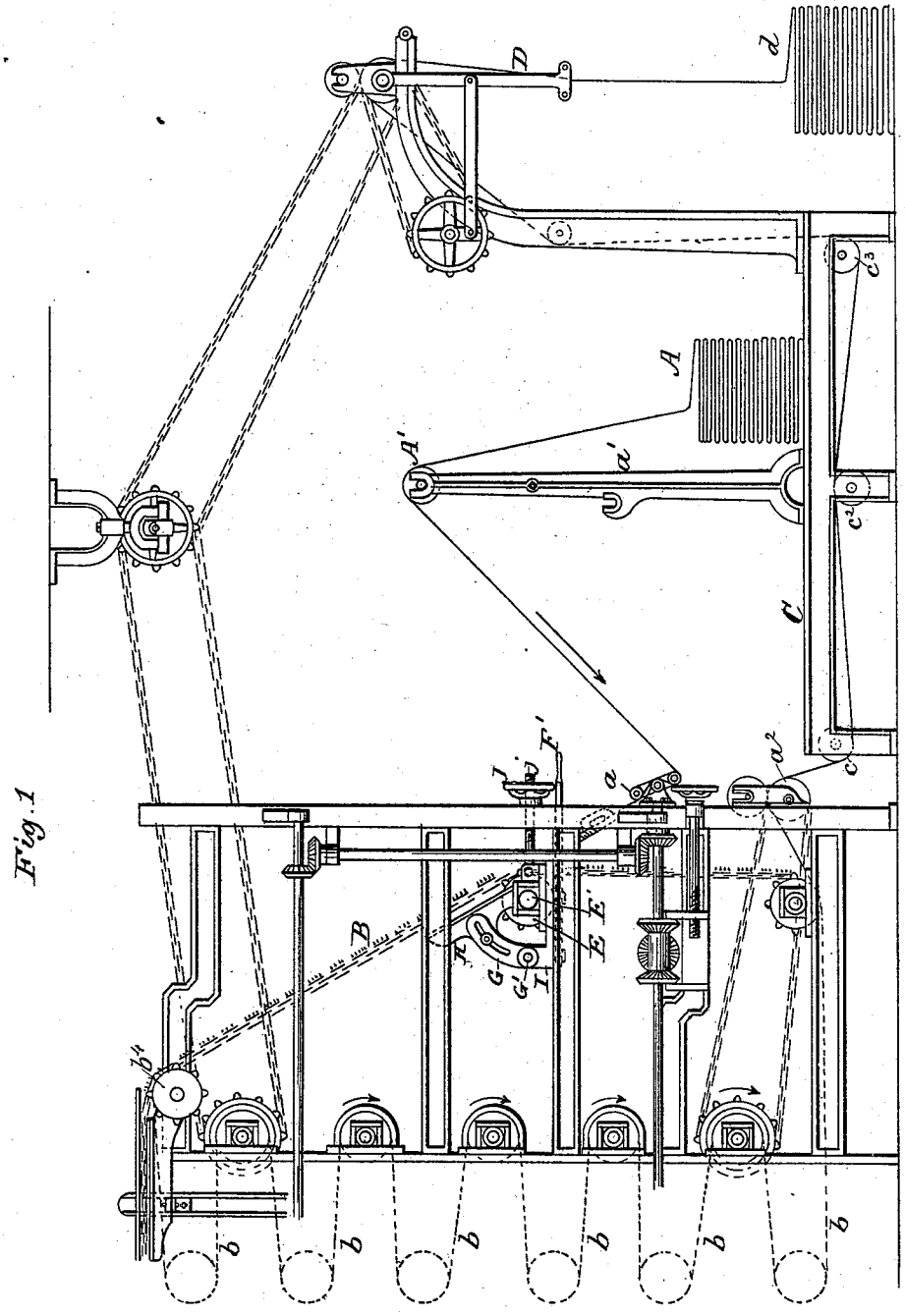


Fig. 1

WITNESSES

A. B. Driggs

L. D. Heinrichs

INVENTOR

David R. Kinyon

by E. E. Masson, Attorney.

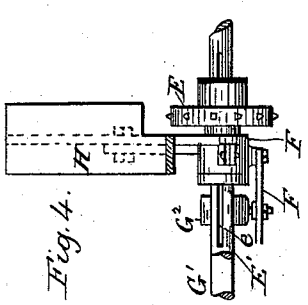
THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

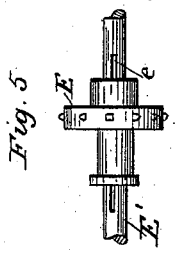
(No Model.) 2 Sheets—Sheet 2.

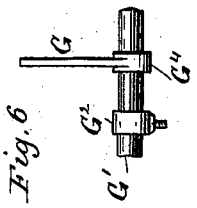
D. R. KINYON.

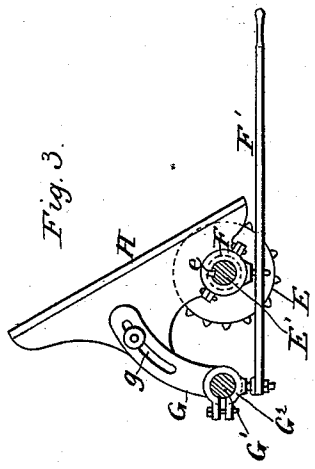
CLOTH STRETCHING MACHINE.

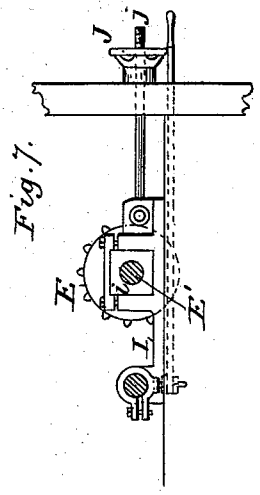
No. 534,649. Patented Feb. 26, 1895.

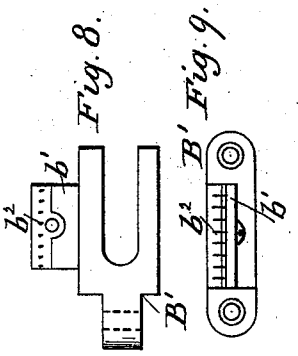


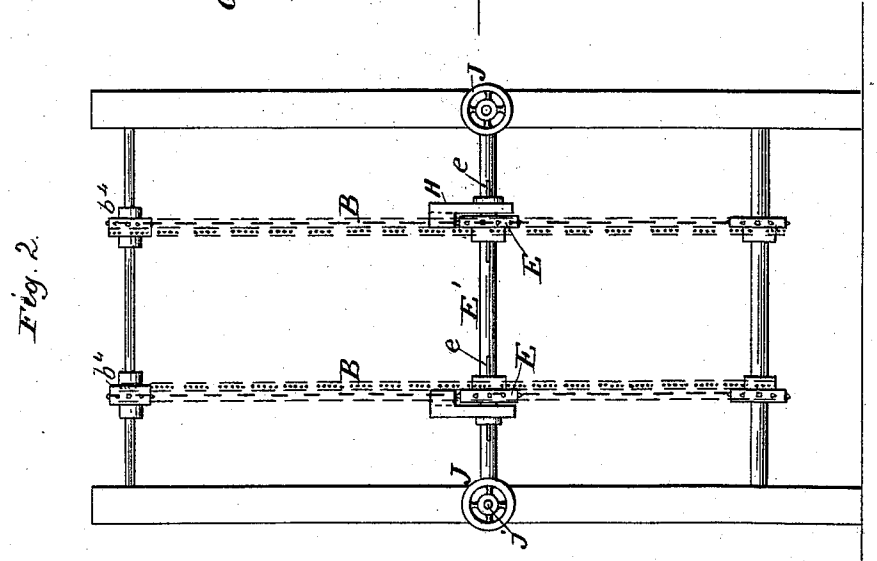












WITNESSES

A. B. Diggs

L. D. Heinrichs

INVENTOR

David R. Kinyon

by E. E. Masson, Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID R. KINYON, OF RARITAN, NEW JERSEY.

CLOTH-STRETCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 534,649, dated February 26, 1895.

Application filed July 2, 1894. Serial No. 516,337. (No model.)

To all whom it may concern:

Be it known that I, DAVID R. KINYON, a citizen of the United States, residing at Raritan, in the county of Somerset, State of New Jersey, have invented certain new and useful Improvements in Cloth-Stretching Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to machines for drying and tentering woolen cloth and other textile fabrics; and the object of my improvement is to provide an improved machine of this class having means for automatically feeding the cloth to the machine and stripping it therefrom and also convenient means for regulating the width of the space between the cloth carrying chains.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the claim.

In the accompanying drawings—Figure 1 is a view in side elevation of so much of a machine of this class as is necessary to illustrate my improvements, the direction of the path of the cloth through the main body of the machine, being shown in dotted lines, the frame thereof being omitted. Fig. 2 is a view in end elevation of the cloth carrying chains and their adjusting mechanism. Fig. 3 is a side view in enlarged detail of the means for adjusting the width of the space between the cloth carrying chains. Fig. 4 is an end view, partly in section, of the same devices. Fig. 5 is a front view of the front shaft and one of the chain wheels showing the collar thereof, the adjusting devices being removed. Fig. 6 is a front view of the rear shaft with its stationary, and its movable collar carrying a curved arm thereon. Fig. 7 is a side view in enlarged detail of the devices for adjusting the tension, or "taking up the slack" of the chains. Fig. 8 is a plan view of one of the links of the cloth carrying chains. Fig. 9 is a side elevation of the same.

Like letters of reference mark the same parts in the various figures of the drawings.

In the drawings (Fig. 1), A represents the wet cloth which passes over a roll A′ and enters the machine under tension rolls *a*, of a series, from whence it passes in an upward inclined direction until it is caught upon the pins of the cloth carrying chains B, upon which it is carried over upper sprocket wheels b^4 located above and forward of the roll *a* and thence through the drying machine, which may be of any approved construction. The roll A′ is mounted in standards *a′* rising from a platform C, upon or alongside of which the operator stands, and which is placed very near the floor, such a small elevation of the platform being made possible by causing the cloth carrying chains to run first in an inclined direction from the point where they first engage the cloth, to the top of the machine where the drying begins. The path of the cloth through the drier is indicated by dotted lines as at *b*, the cloth passing down through the machine to the guide roll a^2 and thence to the folding devices at D, by which it is delivered, as at *d*, in the usual manner except that it has been made to pass under the guide roll *c*, over the guide roll c^2 and under the guide roll c^3 all mounted on the under side of the platform C.

The cloth carrying chains B, of which there are two, as shown in Fig. 2, are mounted upon suitable sprocket wheels, each chain being composed of a series of links B′ alike in construction and shown in plan in Fig. 8 and in elevation in Fig. 9. Each link has on its inner side, a gill plate *b′* in which are projecting teeth b^2 upon which the cloth is carried.

The cloth first engages the pins on the chains B at the point where they pass around wheels E on the shaft E′. These wheels are mounted on their shaft and connected therewith by splines or feathers *e*, so that they may be moved toward, or from each other, so as to engage and accommodate different widths of cloth. To make this adjustment the following mechanism is provided: On the hubs of the wheels E are loosely clamped, collars F, to which are pivoted hand-levers F′ which extend forward beyond this shaft, and at their opposite ends are pivotally attached to sleeves G^2 clamped on the shaft G′ carrying the lower ends of curved arms G on sleeves G^4 which are loosely mounted on the supplementary shaft G′ as shown in Fig. 6. These arms are curved and slotted as at *g*, Fig. 3, and are bolted to the web of frames H which

are mounted on the shaft E. By moving the levers F′ with the sleeves G^2 of the arms G as fulcra, the frames H and the wheels E carrying the chains B will be adjusted to accommodate different widths of cloth as before stated.

The shaft E′ is journaled in boxes *i*, mounted in sliding pedestals or brackets I, and by operating the hand nuts J on the screw rod *j* that has its rear end secured to said pedestals, the latter with the boxes *i* and shaft E′ may be moved so as to tighten up or slacken the chains B passing over the wheels E. The frames H serve to support the gill-chains at the point where the cloth is first secured upon their pins, and its angle may be adjusted on the shaft when desired. The provision of the curved slots and bolts for attaching these frames to the arms G permits of such angular adjustment of the frames without interfering with the lateral adjustment thereof to accommodate different widths of cloth as before described.

The shafts and gearing shown in Fig. 1 and not particularly referred to, are parts of well known drying machines and being no part of these improvements, are not herein specifically mentioned.

From the foregoing description it will be seen that the operator is enabled to occupy a position very near the floor, and at the same time properly attend to both the feeding of the wet cloth into the machine and the delivery of the dry cloth therefrom. Said operator while receiving the dry cloth always has the feeding-in devices under his eye and can see that they are operating properly and he can at any time promptly adjust the chains for varying the widths of cloth without leaving his position.

Having described my improvements, I claim as new—

In a cloth drying and tentering machine the combination of the cloth carrying chains, their supporting wheels E, a splined shaft upon which these wheels are mounted, the frames H supported on the hubs of said wheels, the curved arms G adjustably attached to said frames, a supplementary shaft upon which said arms are loosely mounted, and a hand lever fulcrumed on the supplementary shaft for adjusting the frames H and the chain carrying wheels on their shaft substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID R. KINYON.

Witnesses:
L. R. VANDERBURGH,
THEO. R. SAMUS.