

M. Nelson.
Wayn Dresser.

N^o 94,765.

Patented Sep. 14, 1869.

Fig. 1.

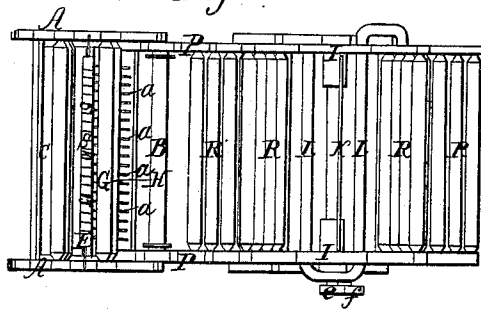


Fig. 2.

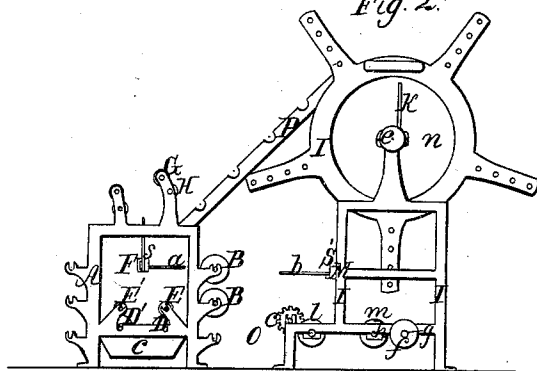
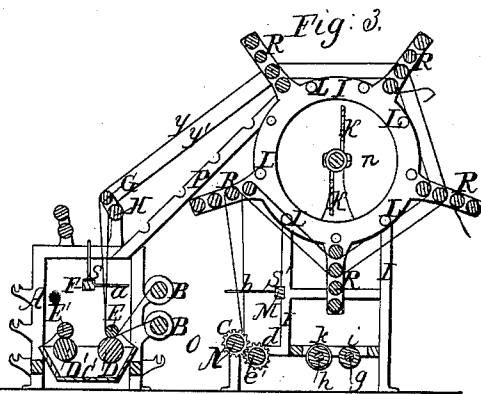


Fig. 3.



Witnesses;

S. K. Piper.
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Inventor;

Moses Nelson
by his attorney.
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MOSES NELSON, OF TAUNTON, MASSACHUSETTS.

Letters Patent No. 94,765, dated September 14, 1869.

IMPROVEMENT IN WARP-DRESSING MACHINE.

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

To all persons to whom these presents may come:

Be it known that I, MOSES NELSON, of Taunton, of the county of Bristol, of the State of Massachusetts, have invented an Improved Warp-Dresser; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view,

Figure 2, a side elevation, and

Figure 3, a longitudinal section of it.

In carrying out my invention, I have arranged the parts of the machine so that an attendant may pass between the delivering and receiving-beams or rollers for the purpose of gaining ready access to the yarns, for piecing or joining those which may become broken, and also for properly arranging them; the arrangement being also such as to enable a person, while standing at the end of the frame of the delivery-rollers, to readily watch the operations of the mechanism disposed within and on each side of such frame.

In the drawings—

A represents the frame for supporting the delivery-beams or rollers B B.

It also carries the size-trough *c*, and the sizing-rollers D E.

As usually made, it has two sets of delivery-rollers and two sets of size-rollers, the duplicate set of size-rollers being exhibited at D' E'.

When there are two sets of size-rollers on the frame, the machinery to be used on each side of the middle of the frame, or a vertical plane passing midway between the two sets of size-rollers, is to be alike.

That on one side of such plane, I will now proceed to describe.

There is hung within the middle of the frame a horizontal bar, F, carrying a series of guide-arms or prongs, *a a a*, there being on the top of the bar a scale, S, of divisions, with numbers, to indicate and mark the spaces between the said wires.

The yarns Y Y' to be sized are led from the beams B B, between the size-rollers D E, thence upward between the guides *a a*, thence over two separate guide-rollers, G H, arranged in the frame A in manner as represented.

From the rollers G H the yarns continue upward in a slanting direction, one over the other, and are led in manner as represented, between the rollers of several series of guide-rollers, R R R R, arranged radially from a common centre or axis, and supported within, and by a frame, I, in manner as represented.

Within the frame I is a rotary fan, K, which is arranged to revolve within a series of steam-pipes, L L, circumscribing it, and disposed within the frame I, and with respect to the several series of guide-rollers, R, in manner as shown in the drawings.

From the last of the series of guide-rollers the yarns are led between another series of guide-wires or prongs, *b b*, projected from a bar, M, arranged horizontally in, and supported by the frame I.

On the top of the said bar M is a scale, S', corresponding with, and numbered like the scale S, hereinafore mentioned, there being the same number of guide-wires in each series.

From the series of guide-wires *b b* the yarns are led to and upon a receiving-beam or roller, N, which is supported by the frame I, and is provided with a gear, *c*, to engage with another or driving-gear, *d*, carried by a shaft, *e*, the whole being as shown in the drawings.

Between the two frames A and I, or in other words, between the delivery and the receiving-rollers there is a clear space, O, for a person to walk or pass into or through, so as to enable him to gain access to the yarns, both as they proceed to and from the size-rollers, and descend to the receiving-beam.

Furthermore, the two frames A and I are joined by two inclined bars or bridges, P P, whose purpose is to support a serpentine coil of steam-pipe, which, when used, are to be arranged underneath the yarns where they extend from one frame to the other.

The rotary fan may receive rotary motion by means of an endless band going about a pulley, *e*, on the shaft of the fan, and another pulley, *f*, fixed on a driving-shaft, *g*.

This driving-shaft, when revolved, may also give rotary motion to another shaft, *h*, by means of an endless belt working around two drums, *a k*, carried by such shafts.

Furthermore, from the shaft *h* rotary motion may be imparted to the driving-shaft of the receiving-beam by means of an endless band working around two pulleys, *l m*, fixed on such shafts.

In the operation of this warp-dresser, the fan, while in revolution, will draw air through the circular openings *n n*, of the frame I, and will discharge such air against and between the steam-pipes carried by such frame. The air, heated by such pipes, will be forced against, and between the yarns circumscribing the series of steam-pipes, and in so doing will have the effect of drying them.

The scales S S', with their guide-wires arranged as described, are of great advantage, as they insure the correct arrangement of the yarns, particularly after breakage of them. In my machine, the yarns, after leaving the size-rollers, are all kept separate or are apart from each other while being dried. This is a great advantage, as it prevents adhesion of the yarns together, and the injury which usually results to them in consequence of such adhesion.

From the above, it will be seen that in my arrange-

ment of the mechanism, the drying-mechanism and the carrying-rollers thereof are not placed between the delivery and receiving-rollers, nor between their two sets of guide-wires, so as to intervene in a manner to prevent a person, while standing between them, from readily gaining access to either, as occasion may require. In fact, the arrangement carries the drying-apparatus so above or out of the way of the delivery-rollers B B, and the receiving-roller N, and their two series of guides *a b*, as to enable them to be disposed in close proximity, with a narrow passage, O, intervening between them, in manner as represented.

I therefore claim the improved arrangement, substantially as hereinbefore described, and as represented in the drawings, of the delivery and receiving-rollers and their sets of guides, the sizing-mechanism, and the drying-apparatus, the whole being so that the deliv-

ery and receiving-rollers, and their guides, may be in close proximity, with the passage O between them, and with the drying-apparatus disposed so as not to come between the said receiving and delivery-roller and their sets of guides, so as to prevent access to either by a person when standing between them.

I also claim the arrangement and combination of the two steam-pipe supporting-bridges P P, with the two frames A I, the series of guides *a b*, the passage O, and the sizing and drying-mechanism, and the series of guide, delivery, and receiving-rollers arranged on such frames, substantially as described.

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Witnesses:

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