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WARP-THREAD STAND FOR TEXTILE DRAWING-IN MACHINES

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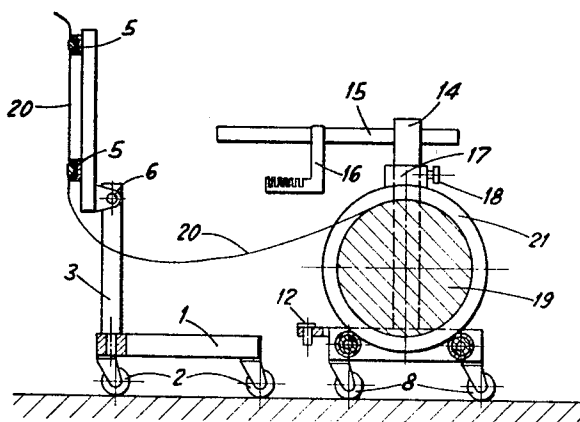


Fig. 2

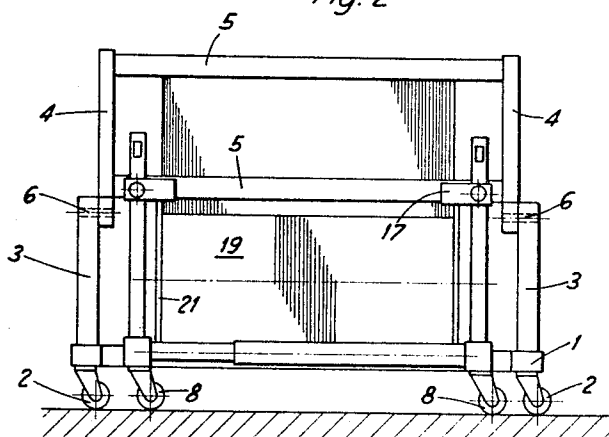


Fig. 1

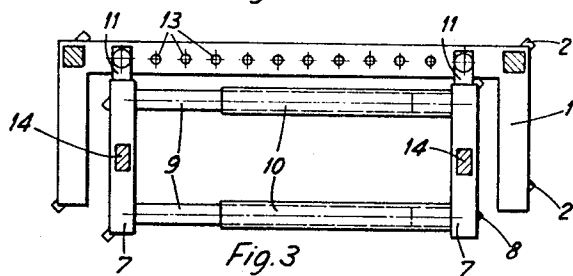


Fig. 3

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WARP-THREAD STAND FOR TEXTILE DRAWING-IN MACHINES

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7 Claims. (Cl. 28—44)

The invention relates to a warp-thread stand for textile drawing-in machines.

In a known warp drawing-in machine the warps are put over a movable frame which can be placed by the machine relative to the machine in such a manner that the warp threads come successively within the range of a thread-separating mechanism whereafter the threads are individually separated and drawn into heddles. Frames or stands of this type are designed to receive a warp beam or two warp beams, when drawing in double-beamed warps, since the warp beam or beams must move along with the frame during the drawing-in operation. Although such frames can be movable they cannot be moved through the weaving rooms because of their size. Consequently, the warp beam must be placed on the stand by some means before drawing-in and must be removed from the frame together with the drawn-in harness, after the drawing-in has been completed. Trucks which can be driven directly to the loom are used to transport the warp beam with the drawn-in harness. However, the transfer is complicated and time-consuming since the warp beams have a considerable weight and since the drawn-in warp must be handled carefully.

An object of the invention is to obviate the drawbacks of conventional warp drawing-in machines.

According to the present invention, there is provided a warp-thread stand or frame for textile drawing-in machines, the frame comprising a first component for accommodating the section of at least one warp to be drawn in and a second, traveling component for accommodating at least one warp beam, the two components being capable of being separated or being connected to each other in such a manner that the first component is carried along by the second component when the second component is moved.

An embodiment of the invention is illustrated in the accompanying drawing in which:

FIG. 1 shows an elevation of a warp-thread draw-in frame according to the invention.

FIG. 2 is a part-sectional side view of the frame shown in FIG. 1, the two components of the frame being separated from each other.

FIG. 3 is a part-sectional plan view of the frame.

Referring more particularly to the drawing wherein like parts are designated by like numerals in the several figures, the illustrated frame comprises a first component intended to accommodate the section of the warp which is to be put in. This first component comprises a U-shaped bottom portion 1 which travels on four swivel casters 2. Two columns 3 whose upper ends carry bearing pins 6, are mounted on the lower portion 1. Lateral supports 4 are rotatably mounted on the pins 6. These lateral supports 4 are interconnected by warp clamping rods 5 and constitute a frame which can be positioned horizontally for fixing the warp and then brought into a vertical position for drawing in the warp threads. The frame is maintained in the aforesaid positions by locking devices, not shown.

A second movable component serving to accommodate the warp beam comprises two side pieces 7, each of which is supported by two swivel casters 8. The side pieces 7

are connected by two telescoping tubes 9 and 10, the tubes 9 being rigidly connected to one side piece 7 and the tubes 10 being connected in a similar manner to the other side piece 7. Each side piece 7 is provided with a bracket 11 which has a bore at its end to receive a coupling pin 12. The bottom part 1 has bores 13 into which, when registered with the bores of the brackets 11, the coupling pins 12 extend. The tubes 9 and 10 also serve as a support for the warp beam. Each side piece 7 has a column 14 with an aperture at its upper end for accommodating a rod 15. The rods 15 receive and support the drawn-in harness frames and carry holders 16 for the droppers of the warp threads. Brake blocks 17 are longitudinally displaceably mounted on the columns 14 and can be secured in a desired position by clamping screws 18.

When the aforescribed stand is in use, the first component which is intended to accommodate that section of the warp which is to be drawn in, remains close to the drawing-in machine, while the second component is used to fetch the warp beam. The tubes 9 and 10 are displaced with respect to each other in such a manner that the second component has a length corresponding to the length of the warp beam and that the holes in the brackets 11 are spaced by a distance which suits the spacing of the holes 13 on the bottom portion of the other first component. A warp beam 19 is then placed on the tubes 9 and 10 and travels with the second component to the first component. A locking device, not shown, prevents the tubes 9 or 10 from sliding into each other during such travel. The two components of the frame are then brought into the position relative to each other shown in FIG. 3 and linked together by the coupling pins 12. A suitable portion of the warp 20 is then unwound from the beam 19 and stretched, in known manner, over the frame formed by the lateral pieces 4 and the clamping rods 5. To prevent the warp beam 19 from rotating while the warp is stretched over the frame 4, 5, the brake block 17 on each side piece 7 is pressed against discs 21 of the warp beam 19 and maintained in this position by means of the clamping screws 18. Once the fixing of the warp has been completed, the stand as a whole is coupled with the drawing-in machine in the known manner whereupon the warp threads can be drawn in. After completing the drawing-in operation, the stand as a whole is moved away from the drawing-in machine, whereafter the drawn-in shafts can be slid upon the rods 15. If, on the drawing-in machine, also droppers have been drawn in simultaneously, the dropper carrier rails must be placed into the holders 16 prior to moving the shafts onto the rods 15. The warp beam with the drawn-in harness can then be moved either directly to the loom or into the store or drawn-in warp, rotation of the warp beam being prevented by the brake blocks 17.

It is advisable to provide for each stand several components for accommodating the warp beam, because in this way the drawn-in warp can remain for extended periods of time in storage on the movable stands and does not have to be unloaded in order to free the stand component for fresh warps.

I claim:

1. A stand for warp drawing-in machines, comprising:
 - a first component for accommodating the section of at least one warp to be drawn in,
 - a second component for accommodating at least one warp beam,
 - each of said components having means affording independent movement of said components, and
 - means for selectively removably connecting said two components to one another for moving said first component upon movement of the second component.

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2. A stand for warp drawing-in machines, comprising:
 a first component for accommodating the section of
 at least one warp to be drawn in including a bottom
 portion supporting a frame structure carrying a
 plurality of warp clamping rods, 5
 a second component for accommodating at least one
 warp beam including a pair of side pieces support-
 ing means for carrying at least one warp beam,
 said bottom portion of said first component and said
 side pieces of said second component being provided 10
 with wheels for transportation thereof,
 said side pieces each being provided with fastening
 means secured to one end thereof, and
 coupling means formed in said bottom portion along
 the length of one side thereof for engaging with said 15
 fastening means on said side pieces to selectively
 removably secure said two components to one
 another.
3. A stand for warp drawing-in machines as defined in
 claim 2 wherein said fastening means is in the form of a 20
 pair of brackets extending from respective side pieces
 and a coupling pin provided in the end of each bracket,
 said coupling means being in the form of holes in said
 bottom portion.
4. A stand for warp drawing-in machines as defined in 25
 claim 2 said first component further includes a pair of
 columns mounted on said bottom portion, said frame
 structure being pivotally supported on said columns.
5. A stand for warp-drawing in machines, comprising 30
 a first component for accommodating the section of
 at least one warp to be drawn in,
 a second component for accommodating at least one
 warp beam,
 each of said components having means affording inde-
 pendent movement of said components, and
 means for connecting said two components for moving 35
 said first component upon movement of the second
 component,

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- said second component being provided with supports
 for drawn-in harness frames, and with brake means
 for preventing rotation of the warp beam.
6. A stand for warp-drawing in machines, comprising
 a first component for accommodating the section of at
 least one warp to be drawn in,
 a second component for accommodating at least one
 warp beam,
 each of said components having means affording inde-
 pendent movement of said components, and
 means for connecting said two components for moving
 said first component upon movement of the second
 component,
 said second component comprising two side pices pro-
 vided with said means affording movement of the
 second component, and means interconnecting said
 side pieces, said means including means for varying
 the distance between said side pieces.
7. A stand as defined in claim 6 wherein said means
 interconnecting said side pieces are in the form of tele-
 scoping tubes.

References Cited by the Examiner

UNITED STATES PATENTS

1,342,896	6/1920	Colman et al.	28—44
1,357,346	11/1920	Player	28—42
1,652,316	12/1927	Moore	28—42
2,994,939	8/1961	Mathews	28—42

FOREIGN PATENTS

787,839 12/1957 Great Britain.

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