

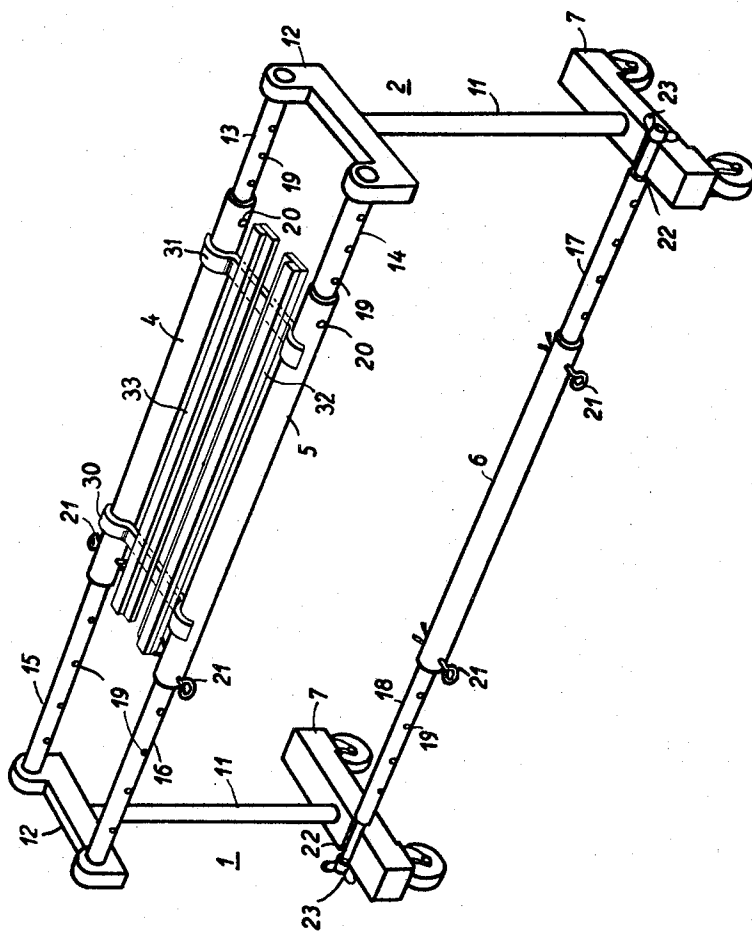
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SUPPORT FRAME FOR WARPS

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SUPPORT FRAME FOR WARPS

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ABSTRACT OF THE DISCLOSURE

A warp-stretching frame for warp-tying machines having first and second substantially vertically disposed uprights and a plurality of interconnecting telescoping sections extending between said uprights to form an adjustable frame having a thread clamping means supported on an upper pair of telescoping sections, a lower telescoping section inter-connecting the base of each of said uprights being inter-connected between the uprights in a readily removable manner.

This invention relates in general to weaving, and more particularly, to a warp-stretching frame for warp-tying machines and the like.

Known warp-stretching frames are designed in such a way that the warps can be tied on the loom itself. In this case, the warp threads to be tied together must be capable of being stretched as near as possible to the harness in order to minimize waste.

Certain types of looms are now being designed in such a way that the warp beam is not supported on the loom itself, but is supported on its own stand in front of the loom (a so-called chevalet). In order to enable a warp-stretching frame to be brought as close as possible to looms of this kind, the present invention provides a warp-stretching frame for warp-tying machines and the like, comprising substantially non-removable longitudinal sections which interconnect two end uprights of the frame and consisting of a plurality of parts which are interconnected in such a way that the entire length of the longitudinal sections is variable. Thus, the uprights of the frame may, if desired, be pushed so far apart that the frame itself can be moved toward the loom over the warp beam support and over any other obstacles to a position close to the harness. At the same time, the working width remains limited to the effective width of the layer of warp threads, one warp-stretching frame being sufficient for looms of different widths.

An embodiment of the invention is more fully explained with reference to the following detailed description with reference to the accompanying drawing which is a perspective view of a warp-stretching frame in accordance with the instant invention.

The frame illustrated in the drawing comprises uprights 1 and 2 which are connected by tubular cross bars 4, 5 and 6. The uprights 1 and 2 have feet 7 in the form of rectangular blocks which are connected by tubes 11 with upper yokes 12 and are provided with caster wheels or other means for facilitating movement of the frame. Rods 13, 14, 15 and 16 inserted into respective open ends of and slidably engaging with the tubular cross bars 4 and 5 are anchored at one end thereof in suitable apertures in these yokes 12. Similarly, the feet 7 are connected by the adjustable arrangement consisting of the crossbar 6 with rods 17 and 18 slidably engaging therein. These rods 17 and 18 are placed in grooves 22 in the feet 7 and can be locked in position by means of wing nuts 23 engaging with a threaded end on the rods 17 and 18. However, due to the grooved connection with feet 7, the lower crossbar 6, together with the rods 17 and

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18 can be easily removed without removing crossbars 4 and 5 by loosening the wing nuts 23. This enables the frame to travel over obstacles without interference.

The rods 13, 14, 15, 16, 17 and 18 are displaceable in the respective crossbars 4, 5 and 6 so that the distance between the uprights 1 and 2 of the frame may be adjusted as required. In order to fix the uprights at the desired distance from one another, while one bore 20 is formed in each end of the crossbars 4, 5 and 6. The rods 13 to 18 can thus be locked in several selective positions relative to the crossbars 4, 5 and 6 by means of locking members, for example, split pins 21, or other conventional fastening means, shown in only two of the bores 20 in the figure for purposes of illustrating the bores so that, when the frame as a whole is moved, both the distance separating the uprights and its stability remain unaffected.

The crossbars 4 and 5 are provided with means which act as spreaders, stretchers or clamps for the warps and may take the form, for example, of clamping devices 32 and 33, such as shown in detail in my U.S. Patent No. 2,942,324, dated June 28, 1960. These clamping devices are provided with means (not shown) for properly spacing the warps and also include a tensioning means (not shown) which acts to press the warp threads against suitable elements which act as pressure pads therefor. The clamping devices 32 and 33 are supported on the crossbars 4 and 5 by suitable means, such as transverse brackets 30 and 31; however, any other means of support or direct fastening of the devices to the crossbars would be suitable.

While I have shown and described one embodiment in connection with the instant invention, it is understood that the same is not limited thereto but is susceptible of numerous changes and modifications as known to a person skilled in the art, and I therefore do not wish to be limited to the details shown and described herein but intend to cover all such changes and modifications as are encompassed by the scope of the appended claims.

I claim:

1. A warp-stretching frame for warp-tying machines and the like, comprising first and second substantially vertically disposed uprights, a plurality of telescoping sections inter-connecting said first and second uprights at one end thereof in a substantially non-removable manner, a readily removable telescoping section interconnecting said first and second uprights at the other end thereof, and thread clamping means supported on said plurality of telescoping sections for maintaining a plurality of threads in spaced parallel relationship, each non-removable telescoping section including a central tube and a pair of rods slidably inserted in respective ends of said central tube, the free end of each rod of a pair of telescoping sections being secured in a respective one of said uprights in a substantially non-removable manner, said thread clamping means being supported on said central tubes.

2. A warp-stretching frame as defined in claim 1 wherein said telescoping sections each include means for selectively locking said rods with respect to said central tube so as to determine a desired length of each telescoping section.

3. A warp-stretching frame as defined in claim 1 wherein said uprights each consist of a tubular center portion, an elongated foot portion mounted transversely to said center portion at one end thereof and an upper yoke portion secured to the other end of said center portion and having a pair of apertures therein each receiving a free end of a telescoping section.

4. A warp-stretching frame as defined in claim 1 wherein said rods are provided with a plurality of through-apertures spaced along substantially the entire length

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thereof, each central tube being provided with a through-aperture adjacent each end thereof, and fastening means for adjustably securing said rods with respect to said central tube in each telescoping section by passing through apertures in registration in the respective elements.

5. A warp-stretching frame as defined in claim 4 wherein each foot portion contains a slot therein, said removable telescoping section having the ends thereof releasably secured in a respective slot in said foot sections.

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