May 8, 1951 E. J. McBRIDE 2,552,338

CREEL

Filed Feb. 10, 1948

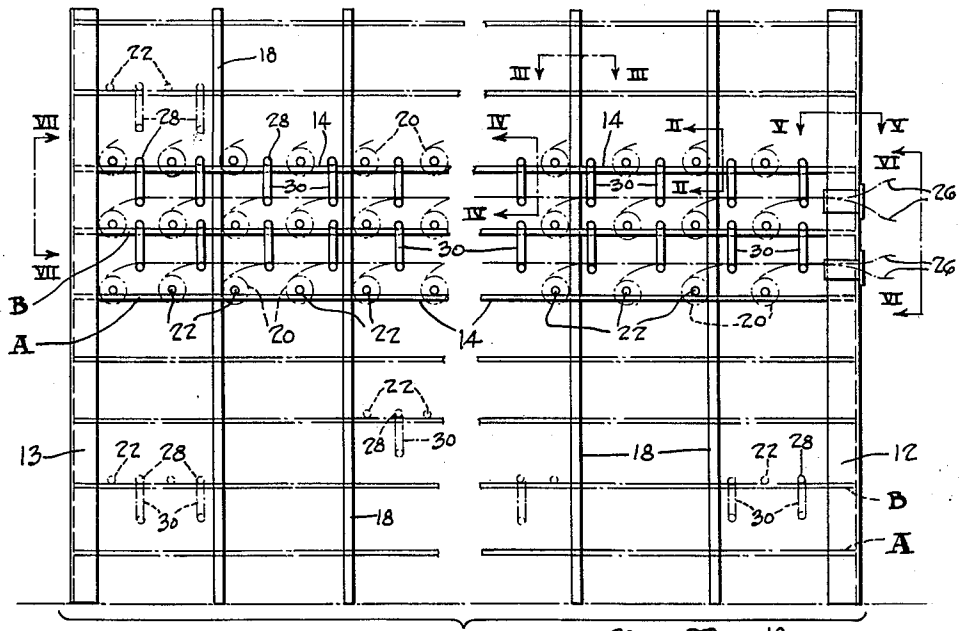


FIG. 1

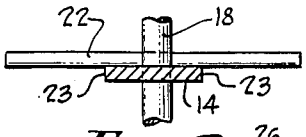


FIG. 2



FIG. 3

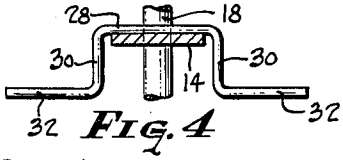


FIG. 4

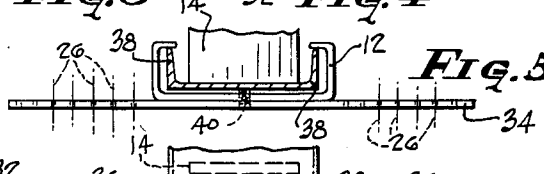


FIG. 5

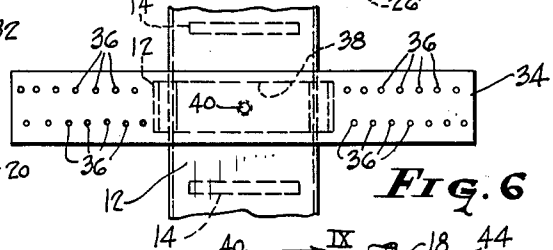


FIG. 6

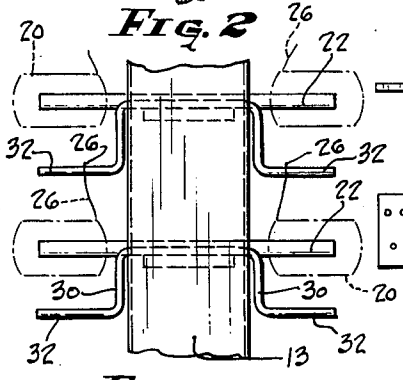


FIG. 7

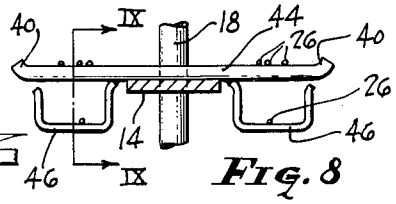


FIG. 8

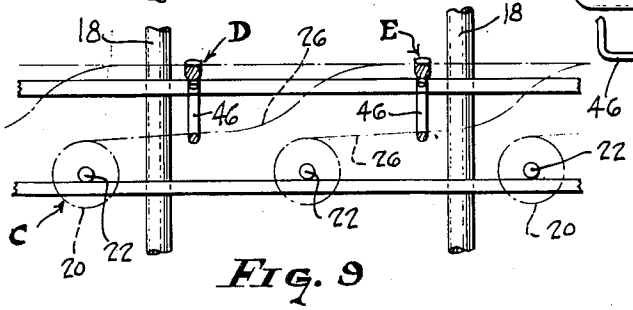


FIG. 9

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CREEL

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2 Claims. (Cl. 242—131)

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Creels of the type used for supplying yarn to weaving machines generally include a plurality of horizontally spaced uprights braced by a plurality of vertically spaced horizontal bars, together with tube supporting pins and yarn guides carried by the horizontal bars. In this construction, the tube-supporting pins were mounted, in horizontally spaced formation, on one horizontal bar, and the yarn guides were mounted, in horizontally spaced formation, on the bar immediately thereabove, the guide pins being vertically out of registration with the tube supporting pins. In this arrangement, only alternate horizontal bars were used for tube-supporting pins and the intervening bars were used for guide pins only. The result was that, for a loom of a given capacity, relatively large creels, or creels having a relatively large number of horizontal bars had to be used.

It is therefore the object of the invention to produce an improved structure whereby tube-supporting pins and the yarn guide pins are mounted on the same horizontal bar thus producing a more compact construction.

Fig. 1 is a fragmentary, diagrammatic, front elevational view of a creel embodying my invention.

Figs. 2 to 7 inclusive, are enlarged fragmentary views looking in the directions of section lines 2—2 to 7—7, respectively.

Fig. 8 is similar to Fig. 4 but showing a modified form of yarn guide.

Fig. 9 is a sectional view taken on line 9—9 on Fig. 8.

In Fig. 1 there is shown a creel embodying my invention and including vertical metallic end channels 12 and 13 disposed at opposite ends of the creel and metallic vertically spaced horizontal bars 14 having their opposite ends welded or otherwise secured to the channels as shown in Fig. 5. In order to brace the structure, metallic vertical, spaced rods 18, which are preferably round in cross section, pass through and are secured to the horizontal bars 14 as shown in Figs. 1 to 4. The horizontal bars are vertically spaced apart a distance sufficient to accommodate the spools or tubes 20 which supply yarn to a loom or looms not shown.

The yarn tubes 20 are carried by straight tube-supporting pins 22 which are welded or otherwise secured to the bars 14 as shown in Fig. 2. As will be seen from Figs. 2 and 7, the pins 22 extend well beyond the opposite vertical or longitudinal sides 23 of the bars 14 so as to support yarn tubes 20 on opposite sides of the creel.

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The yarns 26 move across the creel, from left to right, as viewed in Fig. 1, so as to enter a loom, not shown. In Fig. 1 only two yarn ends are shown for each row of tubes, but it will be understood that the ends from all tubes in any given horizontal row of tubes will move in the manner indicated in Fig. 1.

In order to support and guide the moving yarns 26, I provide guide pins of the type shown in Fig. 4. As shown, each guide pin includes a central portion 28, adapted to be secured to a bar 14 and pendent portions 30 which terminate in horizontal arms 32 on which the yarn ends 26 travel from left to right as shown in Fig. 1. The arms 32 thus occupy positions intermediate the bars 14 and thus eliminate the necessity of a separate bar which was formerly used for supporting the guide pins. Also, because only the central portions of the guide pins are contiguous with the bars 14, and because the arms 32 are disposed between the bar on which they are mounted and the bar therebelow, the capacity of each bar to carry tube yarns 20 is not materially reduced. This advantageous relationship is clearly shown in Fig. 1 from which it will be seen that the arms 32 are located between, and are staggered with reference to the tubes above and below them and that they do not occupy any space which would be useful for mounting yarn tubes. This is important because, if additional bars were placed between the horizontal bars 14, the weight and the cost will be increased and it will be necessary to increase the spaces between horizontal bars 14 over what is now necessary. In other words, by providing the guide pins of Fig. 4, I reduce the cost, the weight and the overall dimensions of the creel.

At the delivery end, the creel is usually provided with a guide plate 34 having as many guide openings in it as there are yarn tubes on each bar 14. As shown in Figs. 5 and 6 the guide plate 34 is provided with guide openings 36 through which the yarn ends from yarn tubes on opposite sides of the creel pass on their way to the loom. Conventionally, the plate 34 is screwed or otherwise fixed to the channel 12 at the delivery end of the creel.

According to my invention, I provide the plate 34 with a U-shaped slide 38 which slidably engages the channel 12 as best shown in Fig. 5. The plate 34 and the slide 38 are provided with tapped holes 40 for receiving a set screw, not shown, by means of which the guide plate 34 is clamped to the channel in position to allow the yarn ends to

pass through the holes **36**. By this construction, the guide plate is detachable from the vertical channel and is adjustable in relation to the horizontal bars **14**.

When a creel of the type described is in use, the yarn ends from a lower bar **14**, such as the bar marked A, will travel over the guide arms **32** which depend from the bar B next above until they reach and pass through the openings **36** in the corresponding portion of the plate **34**, all as shown in Fig. 1.

For certain types of looms, I use the creel shown in Figs. 8 and 9 in which the tube supporting pins **22** are mounted on alternate bars **14** only and in which the intermediate bars **14** only carry guide devices of the type shown in Fig. 8. As will be seen, this type of guiding device includes an elongated arm **44** having upturned ends **40** and welded or otherwise secured to the bars **14** as shown in Fig. 9. On its underside, the body **44** is provided with open guide loop **46** into which the yarn **26**, coming from tubes below and to one side of the guide loops are inserted. In this construction the yarn **26** from each yarn tube **20** will first pass through the loop **46** of one guide device and will next pass over the arm **44** of the next succeeding device. For example, the yarn **26** from a yarn to tube C will pass through loop **46** of guide device D and over the upper surface of the arm **44** of the next succeeding guide device E where it joins the yarn coming from a yarn tube, not shown, to the left of yarn tube C. By this arrangement, the bar **44** of the guide device adjacent channel **13** will have no yarn passing thereover, and the bar **44** of the guide device adjacent the channel **12** will have all but one of the yarn ends passing thereover.

What I claim is:

1. A creel including a plurality of elongated, vertically spaced, horizontal bars, means for supporting said bars, spaced yarn tube supporting pins carried by said bars, said pins being disposed transversely of, and projecting beyond the longitudinal edges of, said bars, and yarn guides carried by said bars, the guides carried by each bar depending therefrom to a position spaced from the bars by which they are carried and from the bar immediately therebelow, said pins and said guides being mounted in alternate order on said bars.

2. The structure recited in claim 1 in which each of said guides includes an elongated portion carried by, and extending transversely of, a bar, and a loop depending from one end of said elongated portion.

EDWARD J. McBRIDE.

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