COMBINATION LOOM LAY AND REED FRAME

Filed April 8, 1954 2 Sheets-Sheet 1

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This invention relates to looms and more especially to apparatus for mounting a reed frame in the lay of a loom, a specially constructed loom reed frame and a method of imparting tension to the dent wires of the loom reed frame when mounted in the lay.

A great deal of care is employed in manufacturing reed frames so that the dent wires will be as uniformly spaced as possible since one of the chief complaints of textile manufacturers and causes of rejects in yard goods is the presence of streaks caused by the imperfectly aligned dent wires, that is to say, it is in which the dent wires are not uniformly spaced or have become twisted, bent or otherwise damaged. Very little can be accomplished in the reed manufacture to eliminate streaking because at the mill the reed frame is placed between the rails of the lay in grooves provided for this purpose and then the cap rail is driven down against the upper back of the reed frame to be sure that the backs are seated in the grooves. The cap rail is made fast by bolts provided for this purpose. As a result of driving the cap rail down against the reed frame and its weight, the reed frame is placed under compression which in turn places the dent wires under axial compression thus bowing them and hence producing an uneven spacing in spite of the precautions taken during the manufacture of the reed to make the spacing of the dent wires uniform.

The principal object of the invention is to provide a lay constructed and arranged to receive a loom reed frame and to apply tension to the dent wires therein. Another object of the invention is to provide attachments for use with a conventional lay to adapt it for mounting a reed frame thereon with its dent wires under tension. Another object is to provide attachments which may be employed with the lay of a conventional loom without major changes therein. Another object is to provide attachments for a loom lay which may easily be installed and adjusted to produce the desired tensioning in the dent wires. Another object is to provide an improved reed frame for use with a loom lay designed to apply tension to the reed frame. A final object of the invention is to provide a method of producing tension in the dent wires of a reed frame.

As is common to most looms, the lay has spaced parallel rails fastened to the rock shaft of the loom by means of conventional swords, the latter being fast at their lower ends to the rock shaft. The lower rail spans the swords, being fastened thereto by bolts, and the cap rail parallels the lower rail, being fastened to the swords at their upper extremities by bolts passing through slots in the swords on which are placed nuts so that the cap rail may be fastened down hard against the top back of the reed frame.

As herein illustrated, the reed frame which has spaced parallel backs between which are fastened the dent wires, is placed between the rails, the cap rail being made fast to the swords close to but not in compressive contact with

the reed back and then tension is imparted to the dent wires solely through the rails by means carried by the rails connecting the backs of the reeds respectively to the rails which may be adjusted to effect equal and opposite stresses on the reed backs in directions away from each other. The reed backs are connected to the respective rails throughout their entire length and one of the connecting means is adjustable with respect to the rails so that by adjusting stresses may be placed on the reed frame which tends to stress the frame in the plane of the dent wires in the direction parallel to the longitudinal axes of the dent wires. Preferably, the conventional grooves in the rails are modified to receive the reed backs and the connecting means are designed in combination with the grooves to hold the backs therein. The backs of the reed frame are preferably specially shaped for lockably receiving latch bars or their equivalents carried by one of the rails and tension adjusting means carried by the other rail.

The method comprises imparting tension to the dent wires independently of the parallel frame means connecting to the reed backs operable to impart tensile stress to the reed frame. To effect the desired tension, the unstressed reed frame is placed between the rails of the lay and its backs connected to the rails in such manner as to anchor one back and adjustably to secure the other back to the respective rails and then the adjustable means is manipulated to apply a stress to one back in a direction away from the other.

The invention will now be described in greater detail with reference to the accompanying drawings wherein:

Fig. 1 is an oblique view of a lay lengthwise thereof showing the left hand portion as viewed from the front of the loom with the shuttle box and picker stick omitted;

Fig. 2 is a perspective view of a fragmentary portion of a reed frame at one end;

Fig. 3 is an end elevation of the lay and rocker support thereof;

Fig. 4 is a vertical section through the lay showing connections for the upper and lower backs of the reed frame;

Fig. 5 is a fragmentary vertical section transversely of the lower rail of the lay showing one way of modifying the rail for receiving the lower back of the reed;

Figs. 6 to 9 inclusive, show alternative ways of modifying the lower rail of the lay for lockably receiving the lower back of the reed frame;

Figs. 10 to 15 inclusive, show alternative ways of connecting the upper back of the reed frame to the cap rail of the lay;

Fig. 16 is a fragmentary elevation view of an alternatively constructed lay for imparting tension to the reed frame; and

Fig. 17 is an elevation view of an alternatively constructed lay for countering the applied stress.

Referring to the drawings, there is shown, Fig. 1, a lay 10 made up of spaced parallel rails 12 and 14, attached to the upper extremities 16 of spaced substantially vertically disposed rocker arms 18 (Fig. 3) commonly known as swords, the lower ends of which are fastened for rocking movement to a rock shaft 20. The lower rail 14 of the lay is fastened at its opposite ends to the swords by bolts 22 and the upper rail, sometimes referred to as the cap or hand rail, is fastened by means of bolts 24 extending from the ends of the rails through slots in the swords and being secured therein by nuts. The upper and lower rails 12 and 14 of the lay have grooves 26 and 28 formed longitudinally therein at their inner opposed edges for receiving a reed frame. A shuttle race 30 is fastened to the lower rail adjacent to
the groove 28, and a shuttle guard 32 is fastened to the upper rail so as to be substantially vertically above the race plate and parallel thereto. The foregoing structure is conventional with most looms although it may vary in minor details from one model or type to another; however, any such variations will not effect the invention as will appear hereinafter.

The conventional reed frame (Fig. 2) is a substantially rectangular rigid metal frame consisting of spaced parallel back 16 and 36, joined at the ends by members 40. Between the backs are fastened in spaced parallel relation a plurality of dent wires 42, the spacing of these wires depending upon the count in the cloth to be manufactured and being maintained by coiled springs 33 located adjacent the backs. The ends of the dent wires extend through the springs 33 and are sandwiched between narrow strips 35 which are soldered together and to the wires thus forming the rigid backs 36 and 38. Slender strips 37 of lenticular cross section are driven through the coiled springs on opposite sides of the dent wires and are soldered in place. Since the specific construction used to attach the dent wires to the reed backs is not part of this invention, to avoid confusion in the drawings, where-in a figure represents the reed frame in section the sides of the reed backs and the adjacent spring are shown solid rather than as made up of several parts.

The dent wires may be of circular cross section, flat or oval in cross section, and may be of preferred cross section, being better stiffness than round or flat wires and because the threads passing theretwixt will have minimum contact with the opposed curved surfaces of any pair of wires as contrasted to flat wires. The opposite edges of the wires are preferably rounded so that they will not produce undesirable wear on the shuttle or chand or warp yarn. As used in the appended claims the expression "reed back" is intended to include the springs 33 in such instances as they are illustrated partially imbedded in the backs in which case their inner side may constitute shoulders upon which a purchase may be had for the anchoring means as will appear hereinafter.

In accordance with the invention, both the lay rails and the backs of the reed frame are modified in minor respects. As illustrated in Fig. 4, the lower rail 14 is modified by enlarging the groove 28 therein so that the lower back 38 of the reed frame, a portion of which is made may easily be inserted therein against the bottom of the groove. The race plate 30 projects inwardly across the groove into engagement with the inner edge of the back at the base of the dent wires bearing on the inwardly facing edges of the back at one side of the plane of the dent wires. A latch bar 42 is fastened to the rail 14 at the opposite side of the groove from the race plate 30 for engagement with an inwardly facing shoulder 40, formed in the thickened portion of the back. The combined action of the race plate 30 and the latch bar 42 is securely to lock the lower back of the reed frame to the lower rail 14 of the lay in such a way that the back cannot be removed from the groove by a pull exerted therein in a direction perpendicular to the rail. The upper or cap rail 12 of the lay is provided with a somewhat enlarged substantially rectangular groove 26, in which is slantly inserted an anchoring member fitted with the forming tube 44 of substantially rectangular cross section having a hollow interior 46 for reception of the upper back 36 of the reed frame which in this case is substantially T-shaped. The head of the T, occupies the inside of the tube 44 and the stem extending downwardly through a longitudinally spaced plurality of cap pieces 50 are placed over the groove and through these are placed bolts 52 which extend downwardly therefrom through the rail and into threaded engagement with the top of the tube 44. By rotation of the bolts 52, the heightwise position of the tube 44 in the rail 12 may be varied thereby to exert a pull on the reed frame which tensions the dent wires. While a plurality of plates 50 are shown, it is, of course, possible to employ a single plate commensurate in length with the rail. The reed frame is mounted on the lay bar or cap rail by sliding it endwise so as to telescope the backs with the rails simultaneously or by thrusting the frame downwardly at an angle to the groove 28 in the lower rail 14 so as to clear the latch bar, restoring it to its vertical position with the shoulder 40 abutting the undersurface ends by the race plate 30 over the upper back or cap rail over the upper back of the reed.

The foregoing is merely illustrative of one arrangement for mounting the reed frame in the lay under tension. Other arrangements for attaching the backs of the reed frame to the lay and tensioning it, will now be described.

Referring to Fig. 5, the rail 14 has a groove 28 enlarged not only to receive the lower back 38 of the reed frame but also a latch bar 42. In this case, the lower back 38 as previously described, is provided with a shoulder 40, and the latch bar 42 is fastened inside of the groove against a downwardly sloping wall by bolts 54 and has a lip 43 beneath which the shoulder 40 may be engaged. The race plate 30 projects over the groove into engagement with the inwardly facing edge of the back 38 at the base of the dent wires.

In Fig. 6, the lower rail 14 has a widened, substantially rectangular groove 26 for entering a groove 28 which projects a yieldable latch bar 56. The back 38 of the reed frame is thickened to provide a shoulder 40 when which forces into the groove below the yieldable latch bar 56 anchors the back therein.

Fig. 7 shows the lower rail 14 provided with a rectangular groove 26 and a latch bar 56. The groove 28 which projects a yieldable latch bar 56 of the reed frame inserted therein and held in place, by the race plate 30 at one side of the groove. The plates 30 and 31 project inwardly over the groove into contact with the inwardly facing edge of the back 38.

Fig. 8 discloses a lower rail 14 having a groove 28 provided with a curved bottom. The lower back of the reed frame is made circular in cross section, for example, by fastening semi-circular solid or tube sections to its opposite faces. The back is locked in the groove by a plurality of set screws 60, threaded through the walls of the grooves from opposite sides into engagement with the back above the circular portion thereof.

Fig. 9 shows the lower rail 14 provided with a groove 28 enlarged at the bottom so that the reed back may be tilted therein. A fixed latch bar 62 is fastened to the rail so that a portion of it projects into the groove from one side. The race plate 30 projects over the top of the groove from the other side. By tilting the reed frame to the dot and dash line position so that the back is against the wall opposite the latch bar, it may be thrust into the groove and clear the latch bar. When the back is seated at the bottom of the groove it may then be swung to a vertical position to bring the shoulder 40 beneath the latch bar which locks it in place.

The upper back of the reed frame may also be attached to the cap rail in any one of several ways it being understood that any one of the lower attaching means may be employed with the forming member.

Referring to Fig. 10, the upper rail 12, as heretofore described with reference to Fig. 4, has a rectangular groove 26 therein, in which is slantly received a tubular member 44. As therein shown, the tubular member is made up of two pieces, one of L-shaped cross section and one of oval cross section, the two pieces being bolted together at intervals by bolts 64. The upper back 36 of the reed frame is of rectangular cross section, being designed to fit within the tubular member 44, and the latter has an opening 48 through which the dent wires pass. The tubular member 44 is adjusted vertically with respect to the rail 12, by bolts 52 in the same manner.
as previously described. The back 36 is preferably engaged with the tube 44 by sliding it endwise into the tube. The parts could, of course, be assembled by separating the parts of the tubular member 44, placing them at opposite sides of the back and then bolting them together.

In Fig. 11, the tubular member 44 is substantially the same as that shown in Fig. 10, except that its cross section is shaped to provide shoulders above the spring with which the flanges of the tubular member 44 engage as contrasted to that shown in Fig. 10, wherein the flanges engage the spring itself.

In Fig. 12, a channel 44 is inserted in the rectangular groove 26 of the rail 12, and the upper back of the reed frame is connected to the channel by bolts 66 extending through the rails and through the back. The channel is adjustable within the groove by means of bolts 52.

Fig. 13, discloses a box-shaped upper rail 12, which may be substituted for the conventional rail. Such a box-shaped rail may, for example, be made entirely of metal and is adapted slidably to receive in it the tubular member 44. The latter which is hollow as heretofore described, receives the upper back 36 of the reed frame and is adjustable within the rail by bolts 52.

Fig. 14, shows a pair of plates or bars having circular faces grooves for receiving the upper back of the reed frame 36, which in this instance has been made circular in cross section. The bars 42 are joined together by bolts 68 and are adjustable within the groove by two sets of bolts 52.

Fig. 15, discloses a cap rail 12, in which the tube 44 is adjustable mounted by means of bolts 52 which seat within an open recess in the top of the rail, the plates 50 such as used in Figs. 1 and 4, being omitted.

It is apparent from the foregoing that the reed back attaching means may be designed to anchor the reed to the lay by engagement with specially formed shoulders extending along the backs, the inner shoulders constituted by the inner edges thereof or the inner rounded shoulders constituted by the springs or by bolts or their equivalent passing through the backs.

While in each of the foregoing cases the lay of the loom has merely been modified by changing the size of the grooves, adding latch plates and/or bars and adjusting means, it is within the scope of the invention to provide a lay constructed specially to afford means for receiving the backs of a reed frame and placing them under tension, which may be used in place of the existing lay by removing the latter and bolting the specially constructed lay to the swords. The principal advantage of such specially constructed lays would be that they could be more lighter and less bulky and easier to adjust since the parts could be made with considerable precision as distinguished from a millwright installation which is inevitably makeshift.

While the reed frame is illustrated as placed under tension in all of the foregoing examples by rotation of the bolts 52, it is possible as alternatively illustrated in Fig. 16 to provide adjustable means at the opposite ends of the rails in addition to or in lieu of the bolts 52. Thus the bolts 52 may be employed solely for fastening the reed back attaching tubes 44 in the grooves in the lay rails and bolts 79 may be placed between the ends of the rails together with nuts 72 by which the spacing of the rails may be increased to secure the desired tension in the reed frame.

In some instances it may also be desirable to strengthen the upper lay rail to prevent possible deflection when tension is applied by increasing the thickness of the upper rail from its ends toward its center as illustrated in Fig. 17.

The principal advantages of the construction herein shown are that the conventional looms may be modified in the mills without dismantling sufficiently to receive the modified reed frame and without replacement of any major parts of the loom, that the reed frames themselves need not be modified extensively and that very little skill is required to secure the desired tension after the reed frame has been installed. Other advantages are that the reed frame itself may be dispensed with and even though there may be some damaged or non-uniformly spaced wires the tension of the dent wires tend to rectify the same.

The method aspect of the invention resides in tensioning the dent wires without modifying the reed frame itself by applying stresses to the backs of the reed frame in opposite directions and away from each other so as to tension the dent wires.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

1. A loom lay including a bottom rail and a cap arranged to receive between them a reed frame, a reed frame of the kind having rigid rectangular metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame and being adapted to parallel the bottom rail and cap, and means operably associated with the bottom rail and cap to engage the backs of the reed frame and to apply equal and opposite stresses to said backs in directions parallel to the dent wires to impart tension thereto.

2. A loom lay including spaced parallel rails, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, and means for changing the relative spacing of the first-named means to spread the reed backs in directions to tension the dent wires.

3. A loom lay including spaced parallel rails, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, and said take-up means being operable to apply a stress to the back of the reed frame with which it is associated in a direction to impart tension to the dent wires.

4. A loom lay including spaced parallel rails a reed frame of the kind having rigid rectangular arrangement of metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, means fixedly carried by one of the rails, anchor means carried by the other rail, take-up means being operable to receive the opposite back, and means for adjusting the position of the movable means on its rail in a direction to and from the one rail to impart tension to the dent wires along their longitudinal axes.

5. A loom lay including spaced parallel rails having grooves in their opposite edges, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, means arranged in the groove of one rail to anchor the back of the reed frame thereto, means movably arranged in the groove of the other rail, connecting the opposite reed back to said rail, and means associated with the movable means and the rail with which it is associated to adjust the position of the movable means in directions to and from the one rail.

6. A loom lay including spaced parallel rails having grooves in their opposite edges, a reed frame of the kind
having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, means associated with the groove in one rail to lock the back of the reed frame therein, means mounted in the groove of the opposite rail for movement therein to and from the said rail, said last-named means being interengageable with the other back, and means operably associated with the movable means to change its position in the groove of the rail with which it is associated to impart tension to the dent wires of the reed frame.

7. A loom lay including spaced parallel rails having grooved parts at their opposed edges extending lengthwise thereof, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, means associated with the grooved part of one rail interengageable with the back of the reed frame to lock the reed frame thereto, means movably mounted in the grooved part of the other rail, said means being interengageable with the whole reed back, and means for effecting movement of the movable means in a direction to apply tension to the reed dents.

8. A loom lay including spaced parallel rails having grooves in their opposed edges extending lengthwise thereof, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, a yieldable latch bar mounted on one rail to project into the groove therein from one side for locking engagement with an edge of one of the reed backs seated in the groove, movable means mounted in the groove of the opposite rail for interengagement with the other back of the reed, and means for adjusting the movable means in a direction to impart tension to the dent wires therein.

9. A loom lay including spaced parallel rails having grooves in their opposed edges extending lengthwise thereof for receiving the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, a plurality of set screws extending through the rail walls into the groove from opposite sides for engagement with the edges of the reed back for locking and holding the reed back in the groove, movable means mounted in the groove of the opposite rail for interengagement with the other back of the reed, and means for adjusting the movable means in a direction to impart tension to the dent wires.

10. A loom lay including spaced parallel rails having grooves in their opposed edges extending lengthwise thereof, for receiving the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, a fixed latch bar mounted on one rail with a portion of it projecting into the groove from one side wall for engagement with an edge of the reed back, at one side, a race plate fastened to said rail with an edge projecting over the groove from the opposite side wall for engagement with an edge of the reed back at the opposite side, movable means mounted in the groove of the opposed rail for interengagement with the other back of the reed frame, and means for adjusting the movable means in a direction to impart tension to the dent wires.

11. A loom lay including spaced parallel rails having grooves in their opposed edges extending lengthwise thereof, for receiving the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, a fixed latch bar mounted on one rail with a portion of it projecting into the groove from one side wall for engagement with an edge of the reed back, at one side, a race plate fastened to said rail with an edge projecting over the groove from the opposite side wall for engagement with an edge of the reed back at the opposite side, movable means mounted in the groove of the opposed rail for interengagement with the other back of the reed frame, and means for adjusting the movable means in a direction to impart tension to the dent wires.

12. A loom lay including spaced parallel rails having grooves in their opposed edges extending lengthwise thereof, to receive the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the back of the frame, a fixed latch bar fastened to one rail with a lip extending inwardly over the groove for engagement with an edge of the reed back along one side, a race plate fastened to said rail with a lip overlapping the groove for engagement with the reed back at the opposite side, the edges of the latch bar and race plate being narrower than the width of the reed back but being vertically spaced to permit threading the reed back while inclined between them into the groove, but preventing withdrawal of the reed back when the reed frame is perpendicular to the plane of the race plate, movable means mounted in the groove of the opposed rail for interengagement with the other back of the reed, and means for adjusting the movable means in a direction to impart tension to the dent wires.

13. A loom lay including spaced parallel rails having grooved parts at their opposed edges extending lengthwise thereof, for receiving the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, means for locking one of the reed backs of the reed frame in the grooved part of one rail, an anchoring element interengaged with the other reed back, said anchoring element being movably associated with the grooved part of the other rail, and means for adjusting the anchoring element to and from the one rail.

14. A loom lay including spaced parallel rails having grooved parts in their opposed edges extending lengthwise thereof, for receiving the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, means for locking the reed back along one edge of a reed frame in the grooved part of one rail, a hollow elongated tube movably mounted in the grooved part of the other rail, said tube having an inside wall far enough to receive the back of a reed at the opposite edge and having a narrow slot about the end of the tube wide enough to receive the end of the reed, said slot being too narrow to permit withdrawal of the reed back in a direction perpendicular to said rail, and means for adjusting the position of the tube perpendicular to said rail.

15. In combination a lay having spaced parallel rails, said rails having inwardly facing grooved parts adapted to receive the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, said reed frame being located between the rails with its back seated in the grooved ends, means associated with one of the rails to lock the back of the reed frame seated in the groove therein, and means carried by the other rail engageable with the back of the reed frame seated in the groove therein, operable to apply stress to said back in a direction to impart tension to the dent wires.

16. In combination a lay having spaced parallel rails, said rails having inwardly facing grooved parts adapted to receive the backs of a reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of
the sides, said two sides constituting the backs of the frame, said reed frame being located between the rails, said reed frame having backs engageable with and disengageable from the grooves solely by telescoping endwise movement of the frame with respect to the rails, and means carried by one of the rails for adjustably moving the back seated in its groove in a direction away from the opposite rail and perpendicular thereto.

17. In combination a lay and reed frame, said lay having spaced parallel rails at the inwardly facing edges of which are grooved parts, said grooves having bottom parts large enough to accommodate the backs of the reed frame, a reed frame of the kind having rigid rectangularly arranged metal sides with metal dent wires anchored at their ends between two of the sides, said two sides constituting the backs of the frame, and mouths narrower than the thickness of the backs through which the backs cannot pass but which are wide enough to entertain the dent wires, said reed backs being interengageable with the grooves solely by telescoping endwise movement of the frame relative to the lay, and means carried by one of the rails interengageable with the back seated in its groove for applying a stress to the back in a direction away from the other rail.

18. That method of applying tension to the dent wires of a reed frame having spaced parallel backs joined at their ends with end pieces to form a rigid frame and a plurality of dent wires fastened at their opposite ends to the backs, said frame being unstressed by said reed wires, which comprises mounting the unstressed reed frame between spaced parallel rails of a loom lay with parts on the rails disposed between the inwardly facing opposite edges of the reed backs, and then adjusting the parts on the rails in directions perpendicular to said inwardly facing edges and outwardly relative thereto.

19. That method of applying tension to the dent wires of a reed frame having spaced parallel backs joined at their ends with end pieces to form a rigid frame and a plurality of dent wires fastened at their opposite ends to the backs, said frame being initially, substantially unstressed, which comprises mounting the reed frame between the spaced parallel rails of the lay of a loom, securing one back of the reed frame to one of the rails throughout its entire length, coupling a rigid adjuster bar to the opposite reed back, adjustably connecting the adjuster bar to the opposite rail and making adjustment of the bar in a direction away from and perpendicular to the one rail.

20. That method of applying tension to dent wires of a reed frame which comprises, providing an unstressed reed frame including reed backs joined at their ends by end members and dent wires fastened between the reed backs, placing the unstressed reed frame between the spaced parallel rails of a loom lay and applying equal and opposite stresses to the dent wires in directions away from each other solely through the intermediary of the rails by connecting the backs of the frame to the rails, and then adjusting the connecting means on one of the rails.

21. That method of applying tension to the dent wires of a reed frame which comprises, providing an unstressed reed frame having reed backs joined at their ends by end members, and dent wires fastened between the reed backs, placing the unstressed reed frame between the spaced parallel rails of a loom lay providing means for connecting the backs continuously to said lay rails, the connecting means between one back and its rail being adjustable, and then adjusting the adjustable connectors to draw one back away from the other.

References Cited in the file of this patent

UNITED STATES PATENTS

362,980 Lee ........................ May 17, 1887
580,182 Emery ........................ Apr. 6, 1897
696,325 Gable ........................ Mar. 25, 1902
990,528 Cote ........................ Apr. 25, 1911
1,983,409 Shimwell ...................... Dec. 4, 1934
2,136,077 Gobelle ........................ Nov. 8, 1938
2,144,462 Noble ........................ Jan. 17, 1939
2,496,628 Kiesley et al. ........................ Feb. 7, 1950
2,544,882 Hornig ........................ Mar. 13, 1951
2,600,536 Hindle ........................ June 17, 1952
2,603,242 De los Santos Izquierde ........... July 15, 1952
2,717,007 Battles ...................... Sept. 6, 1955

FOREIGN PATENTS

454,299 France ........................ June 30, 1913
517,772 France ........................ May 11, 1921