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2,849,029

WIRE CLOTH SELVAGE FORMING MECHANISM

Filed April 23, 1956

4 Sheets-Sheet 1

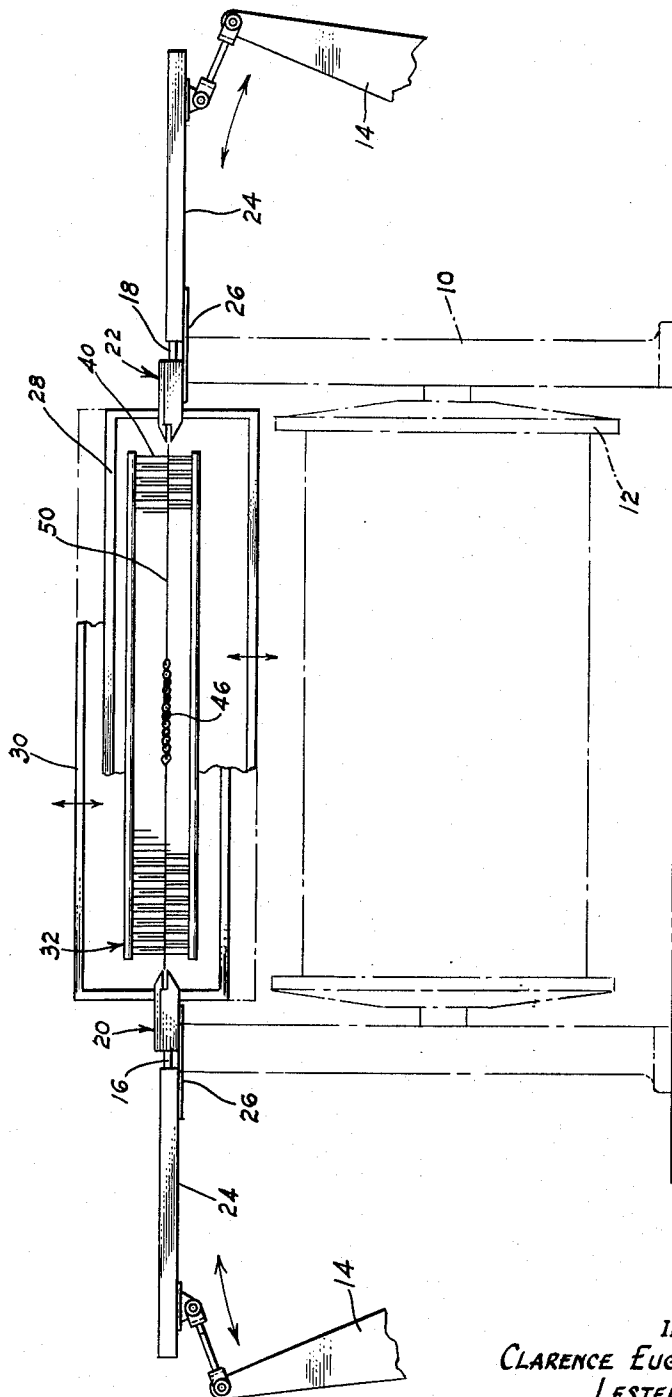


Fig. 1

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4 Sheets-Sheet 2

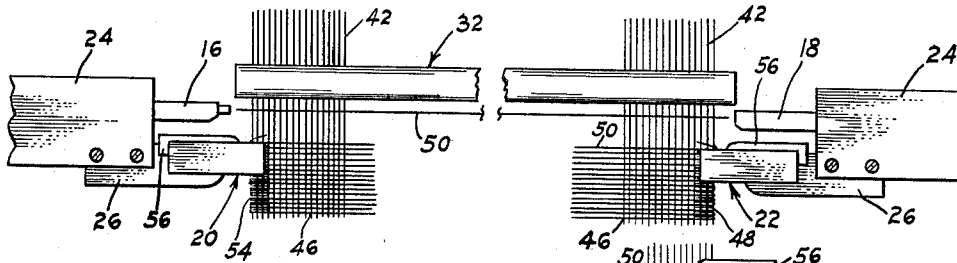


Fig. 2

Fig. 2c

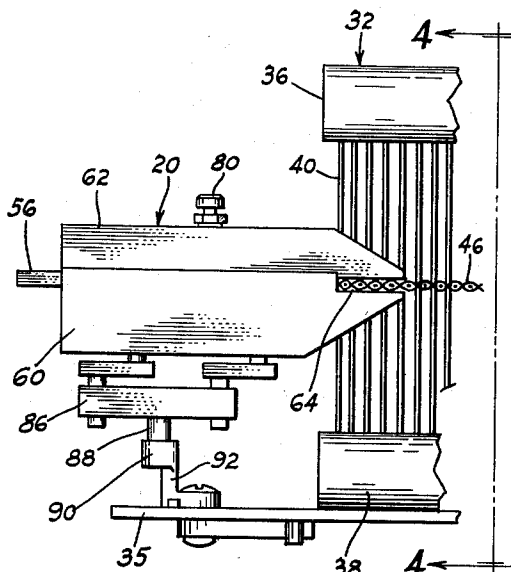


Fig. 3

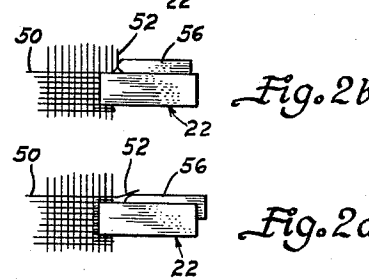


Fig. 2b

Fig. 2a

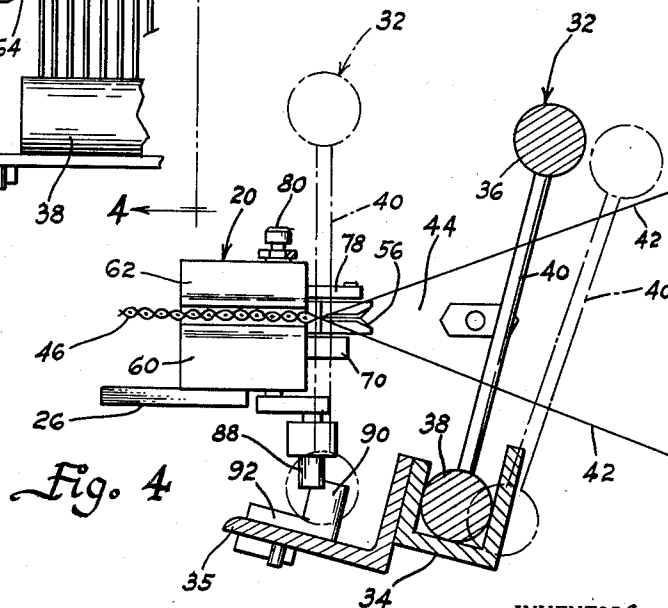


Fig. 4

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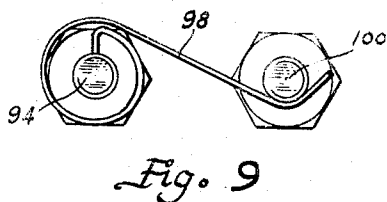
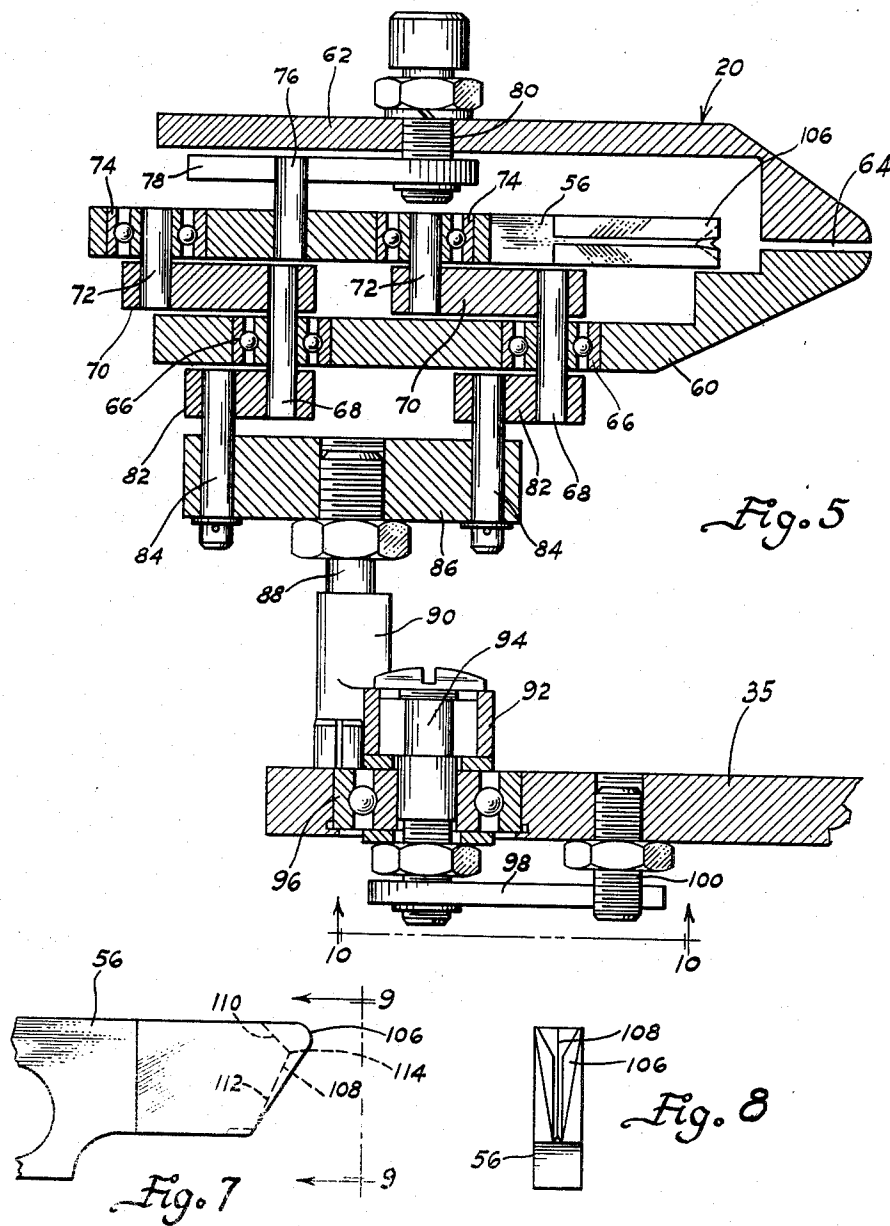
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WIRE CLOTH SELVAGE FORMING MECHANISM

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4 Sheets-Sheet 3



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WIRE CLOTH SELVAGE FORMING MECHANISM

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4 Sheets-Sheet 4

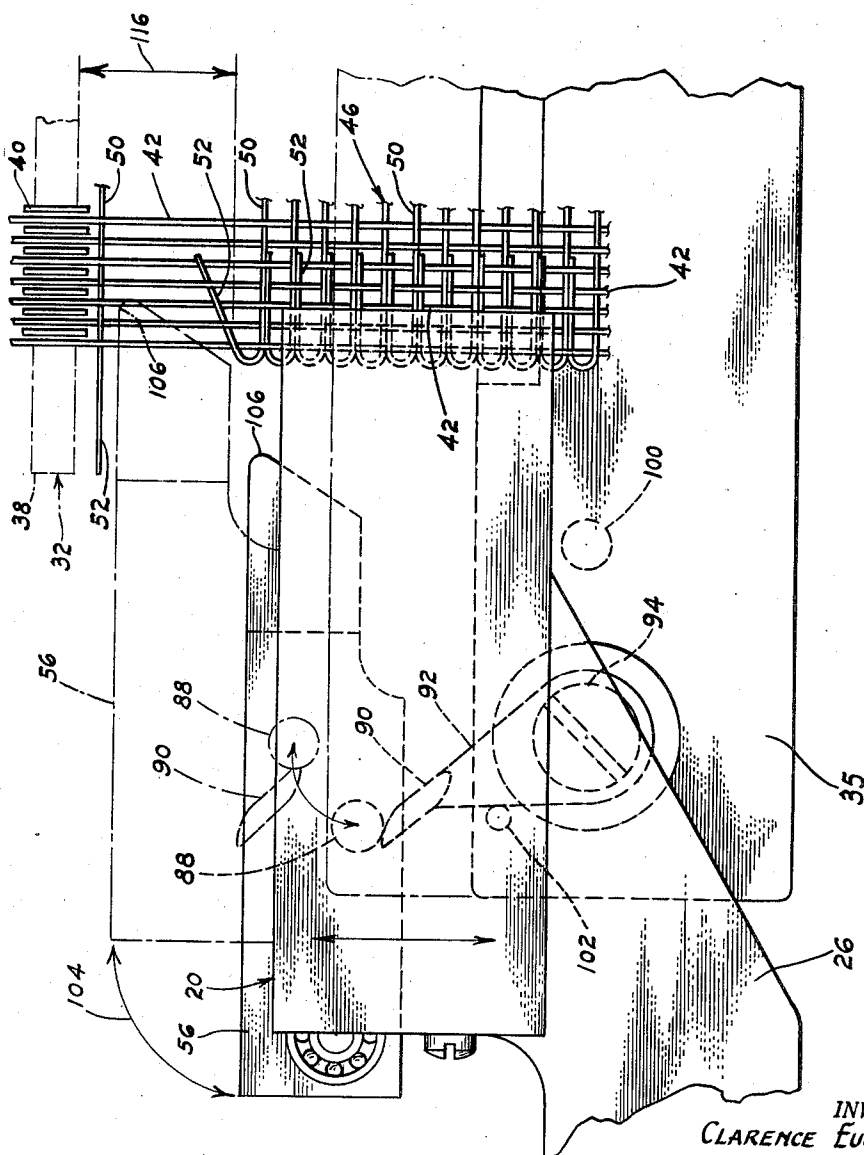


Fig. 6

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WIRE CLOTH SELVAGE FORMING MECHANISM

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Application April 23, 1956, Serial No. 579,915

11 Claims. (Cl. 139—130)

This invention relates to improvements in wire cloth selvage forming mechanisms and more particularly, to improvements in mechanisms comprising tucking units and operating mechanism therefor, the units being arranged on a wire cloth weaving loom adjacent opposite sides thereof. Still further, the present invention primarily is adapted to be embodied in wire cloth weaving looms of the type arranged to weave wire cloth in which the weft wires are separate from each other and have cut ends which initially project short distances beyond the opposite outer edges of the wire cloth, the tucking means comprising the present invention being designed and operable to fold or bend inwardly the projecting outer ends of the weft wires so as to dispose the same preferably between the warp wires of the selvage edges of the wire cloth.

The principal advantage of using looms designed and arranged to dispose suitable lengths of weft wires which are separate from each other in woven relationship between the warp wires of wire fabric or cloth is that no shuttle or shuttle-moving mechanism is required to be used in such looms and, in lieu thereof, gripper carriers and operating means therefor are provided for purposes of continuously feeding, by transversely reciprocating gripper carriers, the weft wire which is contained on a large spool mounted for example at one side of the loom. The amount of wire which may be contained in such a spool is very extensive and conceivably may be adequate to supply the weft wires for forming a given length of woven wire cloth corresponding to the supply of warp wire wound upon the warp drum. As a result of this, no interruption to the weaving action is required as when, in a shuttle type loom, it is necessary either to re-load or replace empty bobbins with full ones.

However, wire made heretofore upon so-called shuttleless looms of the type to which the present invention pertains have presented the problem of suitably finishing the selvage edges of the cloth by disposing the cut weft ends of the cloth in some satisfactory fashion relative to the selvage that it constitutes a useful and saleable commercial product. A number of different arrangements have been provided heretofore to shape such selvage edges in various ways such as bending and twisting the projecting cut ends of the weft wires around either adjacent weft wires or warp wires in the selvage, and bending and welding or soldering said projecting cut ends of the weft wires to either other weft wires or warp wires. These arrangements have not reduced the cost of producing the wire as much as desired and have required the employment of relatively complicated mechanism and additional units to accomplish such finishing operations.

It is the principal object of the present invention however to provide a loom and particularly tucking units especially adapted for use in so-called shuttleless type looms, said units being operable to fold and tuck the projecting cut ends of the weft wires back into the sheds of the loom during the weaving of the wire cloth, where-

by said bent and tucked weft ends are woven into the selvage edges of the cloth so as securely to lock said ends in place within the cloth and prevent any dislodgement thereof relative to the warp wires of the cloth.

It is another object of the invention to use as far as possible the standard equipment of a shuttleless type loom, such for example as the arrangement shown in U. S. Patent No. 2,702,566, assigned to the assignee of the present invention, and to so adapt the tucking units of the present invention thereto that the gripper carriers will place suitably cut lengths of weft wire within the shed formed by the warp wires and, as the gripper carriers release the cut weft wire, the shed is closed so as to hold said newly cut weft or filling wire suitably between the warp wires while the reed commences its beat-up or forward movement, thereby moving said weft or filling wires successively into the predetermined beat-up positions thereof. When this has been accomplished relative to each weft wire, the shed opens and securely holds the newly inserted filling or weft wire in position with its projecting opposite ends arranged to be engaged by tucking means or blades of the aforementioned tucking units which operate to bend the opposite projecting ends substantially into U-shaped configuration and project said bent ends back into the shed.

After the withdrawal of the tucking means or blades, the next successive filling or weft wire is disposed in the shed and, upon the same being moved to its beat-up position by the reed bar, the inwardly bent ends of the last inserted weft wire are finally bent to the position said ends occupy in the finished fabric or cloth. Preferably, the tucked weft ends are of sufficient length that they are interwoven with a suitable number of the warp wires adjacent the outer edges or selvages of the fabric as to become interlocked firmly therewith and thus securely position not only said cut and inwardly bent weft ends but also the weft or filling wires relative to the cloth.

Still another object of the invention is to provide simple cam means by which the tucking means or blades of the tucking units are actuated, said cams preferably being carried for expediency by the lay frame of the loom which also carries the reed bar and permits simple but effective operation of the tucking units.

Still further, it is another object of the present invention to so design the tucking means or blades of the tucking units of the present invention that they engage the projecting cut ends of the weft or filling wires initially in close proximity to the outermost warp wire, and such engagement is preferably made by sharp, apex-like means which insure that when the cut and projecting ends are bent into the shed, they are maintained as straight as possible, whereby the selvage edges of wire cloth woven by looms embodying the tucking units comprising the present invention very closely resemble the conventional selvage edges of cloth woven upon shuttle-type looms, the ends of the weft wires presenting a rounded and smooth edge on the cloth as in the latter type of cloth.

Still another object of the invention is to so arrange the tucking units that they have suitable passages such as slots through which the opposite selvage edges of the woven cloth pass to guide said cloth and facilitate the desired functioning of the tucking mechanism of the invention.

Details of the foregoing objects and of the invention, as well as other objects thereof, are set forth in the following specification and illustrated in the accompanying drawings comprising a part thereof.

In the drawings:

Fig. 1 is a front elevation of an exemplary loom embodying the principles of the present invention, certain conventional portions of the loom either being broken

3

away or omitted to simplify the illustration thereof, while portions of certain conventional elements thereon are shown in phantom by broken lines to highlight the invention.

Fig. 2 is a fragmentary top plan view of the loom shown in Fig. 1 and certain successive positions of one of the tucking units illustrated in Fig. 2 are shown respectively in Figs. 2a through 2c disposed below Figure 2.

Fig. 3 is a fragmentary vertical elevation showing the left-hand tucking unit and a portion of the reed bar of the loom illustrated in Figs. 1 and 2, the illustration in Fig. 3 being on a larger scale than that used in the preceding figures.

Fig. 4 is a fragmentary side view of the portions of the invention illustrated in Fig. 3, as seen from the line 4—4 of Fig. 3.

Fig. 5 is a vertical sectional elevation of one tucking unit per se similar to that shown in Fig. 3 but shown on a still larger scale than in said figure.

Fig. 6 is a top plan view of the left-hand tucking unit shown in Fig. 2 but on a scale similar to that used in Fig. 5, Fig. 6 illustrating in full lines the retracted or inoperative position of the tucking blade, while in broken lines, the projected tucking position of the blade is shown.

Fig. 7 is a fragmentary top plan view showing the wire engaging end of the blade of one of the tucking units embodying the principles of the present invention.

Fig. 8 is an end view of said blade as seen from the line 9—9 of Fig. 7.

Fig. 9 is a bottom plan view detail of the spring return element illustrated in the lower portion of Fig. 5.

Referring now to the figures, wherein like reference characters have been used to indicate like members of the mechanism, an exemplary loom embodying the principles of the present invention is shown in Fig. 1. The relatively stationary frame 10 supports the various movable parts of the loom, including the conventional warp drum 12. Certain conventional portions of the loom such as the finished cloth take-up mechanism, including the rolls conventionally used have been omitted from the illustration so as to render the showing of the present invention more readily understandable. Hence, the views shown in Fig. 1 and also Fig. 2 of the drawings is somewhat schematic.

Disposed at opposite sides of the frame 10 are suitable operating arms 12 which reciprocate the gripper carriers 16 and 18 shown in Fig. 2 and which, in Fig. 1, would be disposed preferably behind the tucking units 20 and 22. Said gripper carriers 16 and 18 may, for example, be of the type illustrated in said aforementioned Patent No. 2,702,566. Stationary supporting means such as plates 24 are fixed relative to the frame 10 and are supported thereon by conventional means, not illustrated so as to simplify the figures. Said supporting plates 24 preferably have suitable guide means which control the reciprocation of the gripper carriers 16 and 18. Further, the supporting plates 24 also afford convenient means to which to connect the tucking units 20 and 22, this being accomplished by exemplary connecting plates 26 by which the tucking units 20 and 22 are fixedly supported relative to the loom frame 10.

Suitable conventional mechanism, not shown, also supports the harness frames 28 and 30 by which the shed is formed and operated in well known manner, the harness reciprocating vertically as indicated by the arrows, in opposite directions. Also, a conventional reed bar assembly 32 is supported for oscillation, for example, by lay frame 34, the lay frame being oscillated by unillustrated but conventional mechanism normally provided in looms of this type. The reed bar assembly 32 comprises a conventional pair of spaced bars 36 and 38 between which the vertical reeds 40 extend and by which they are supported. The warp wires 42 extend between the reeds 40 and are moved conventionally by the harnesses 28 and 30

4

to open and close the shed 44 illustrated in Fig. 4. The reed bar assembly also preferably includes a mounting plate 35 fixed to lay frame 34, for purposes to be described.

According to the operation of conventional looms, for example, of the type shown in Patent No. 2,702,566, the woven cloth or fabric 46 is formed by the gripper carrier 16 carrying the leading end of the weft wire from the supply coil, not shown, transversely through the shed for half the width of the cloth and the gripper carrier 18 meets the carrier 16 midway thereof and engages the leading end of the weft wire, and pulls the same slightly past the right-hand edge of the fabric edge 48 as shown in Fig. 2, whereupon the filling or weft wire 50 is cut by conventional shearing means, also not shown, so as to leave a projecting portion 52 at the left-hand edge 54 of the woven fabric 46 as shown in Figs. 2 and 6. Preferably, the projecting cut ends 52 of each weft wire 50 substantially are equal.

After the gripper carriers 16 and 18 have been withdrawn to the starting position thereof shown in Fig. 2, the shed 44 is closed, in which position the warp wires 42 are substantially parallel as viewed in side elevation, thereby holding the cut weft or filling wire 50 in desired position to be engaged by the reed bar assembly 32 which then is moving in beat-up direction toward the front end of the loom and also toward the tucking units 20 and 22. At the completion of the beat-up operation of the reed bar, the shed is opened by the harness frames being reciprocated vertically in directions opposite to the positions they last occupied when the shed was open, whereupon the last inserted weft wire 50 will securely be held locked in desired spaced relationship to the preceding weft wire of the woven cloth 46 and the opposite cut ends 52 of the weft wire 50 will project beyond the edges of the weave of the cloth.

After the shed 44 has been opened as above described to secure the last inserted filling or weft wire 50 within the woven cloth 46, the reed bar assembly 32 is moved away from the tucking units 20 and 22 and, in being so moved, causes the tucking blades respectively to be moved to the projected, broken line positions thereof shown in Fig. 6, it being understood that the view shown in Fig. 6 represents only the unit 20. The normal, inoperative positions of the blades 56 and 58 are as illustrated in full lines in Fig. 6 relative to blade 56.

Details of the tucking units 20 and 22 and the operating mechanism therefor now will be described, it being understood that these units and the operating mechanism therefor are substantially identical except that one is adapted for use on the left-hand side of the loom, while the other is adapted for use on the right-hand side of the loom.

The tucking unit 20 is shown to best advantage in Figs. 5 and 6. Said unit comprises a housing formed preferably by a body or bottom 60 and top cover 62. The end of the unit 20 nearest the selvage of the woven fabric 46 is provided with a slot 64 extending transversely through the housing for purposes of receiving the selvage edge of the fabric 46, thereby stabilizing the fabric particularly while the projecting cut ends of the last inserted weft or filling wire 50 are being tucked by the blade 56 of the unit. It will be understood that the tucking units 20 and 22 are mounted stationarily relative to the frame 10 of the loom, whereby the fabric 46 moves slowly but progressively, unidirectionally, through the slots 64 of said tucking units toward the front or take-up end of the loom.

The bottom 60 of unit 20 is provided with a pair of preferably anti-friction bearings 66 through which a pair of shafts 68 project. Secured to the upper ends of shafts 68 are a pair of crank arms 70, the outer ends of which have short shafts 72 projecting upwardly therefrom which are received within bearings 74 mounted within tucking blades 56, as clearly shown in Fig. 5.

5

The bearings 74 preferably are of an anti-friction nature. Also projecting upwardly from tucking blade 56 is a pin 76 which is engageable by an exemplary leaf spring 78 comprising means operable to return the tucking blade 56 to its inoperative or rest position illustrated in Fig. 5 and also, in full lines, in Fig. 6. Spring 78 is supported at one end by a suitable anchor such as an adjustable bolt-like means 80 which projects through the cover 62 and about the inner end of which said one end of the spring 78 preferably is coiled so as to afford suitable resilience thereto. The position of the bolt-like means 80 preferably may be adjusted to increase or otherwise adjust the tension of the spring 78 when desired.

Secured respectively to the lower ends of shafts 68 are a pair of crank arms 82 and a pair of crank pins 84 respectively are connected to and depend from the outer ends of said crank arms 82. Extending between crank pins 84 is an actuating bar 86 provided with apertures in opposite ends thereof which receive the crank pins 84. Also depending from the actuating bar 86, intermediately of the ends thereof, is an actuating pin 88 which is engageable by a pivotally mounted cam 90 supported by mounting plate 35 which is secured to lay frame 34 so as to be movable therewith. As will best be seen from Fig. 6, the cam 90 extends vertically from the outer end of cam arm 92, the other end of said arm being connected to a bolt-like pin or shaft 94.

The lower end of shaft extends through bearing means 96 carried by mounting plate 35, the bearing means 96 preferably being of an anti-friction nature. Also connected to the lower end of pin or shaft 94 is one end of an exemplary spring means comprising a coiled leaf spring 98, the outer end of which engages a suitable stop pin or bolt 100, best shown in bottom plan view in Fig. 9. Spring 98 serves to maintain the cam arm 92 and the vertical cam 90 on the outer end thereof in the operative position thereof shown in Fig. 6 relative to the reed unit or assembly 32 which includes the mounting plate 35.

The tucking blade 56 of each of the tucking units 20 and 22 only is operated in the preferred embodiment of the invention during one direction of movement of the reed bar assembly 32, the lay frame 34 and the mounting plate 35 which are connected to operate as a unit. Such movement preferably is the return stroke thereof which takes place after each beat-up movement of the reed bar unit 32. Preferably, when the reed bar unit 32 including lay frame 34 and mounting plate 35, as well as tucking blade 56, are in the inoperative positions thereof as, for example, at the commencement of the return stroke of the reed bar unit and lay frame, the uppermost face of cam member 90, as viewed in Fig. 6, is in engagement with actuating pin 88 of the articulated shafts and crank arms by which the tucking blade 56 of each unit is oscillated about the axes of the shafts 68. Said shafts 68 are operated by crank pins 84 which, in turn, are operated by actuating bar 86 from which actuating pin 88 depends and engages cam 90.

Visualizing from Fig. 6 that the unit 20 is stationary and the return stroke movement of the mounting plate 35 is in a direction toward the top of Fig. 6, it will be seen that the cam 90 is in relatively fixed position upon mounting plate 35, the cam arm 92 being maintained in such position by a stop pin 102 fixed to mounting plate 35. Continued movement of the cam 90 by the mounting plate 35 will cause the actuating pin 88 to move from the lower left-hand position shown in Fig. 6 to the upper right-hand position thereof, said path described by such movement being indicated by an arcuate line and arrow. Such arcuate movement of the actuating pin 88 will be identical with the arcuate movement of the crank pins 84 about the axes of shafts 68. In view of the provision of a pair of shafts 68, it will be seen that the crank arms 70 which are connected by short shafts 72 to each tucking blade 56 will simultaneously be moved

6

arcuately also about the axes of shafts 68 so as to project the tucking blade 56 outwardly to the broken line position thereof shown in Fig. 6, such movement being indicated by the arcuate line 104.

From Fig. 6, it will be seen that the movement of the actuating pin 88 is less than the movement of the tucking blade 56 but this is due to the fact that the crank arms 82 are shorter than the crank arms 70 as is clear from Fig. 5, whereby a movement-multiplying arrangement is afforded so as to provide a substantial projection movement of the blades 56 in directions both away from the unit 20 as well as laterally inwardly toward the woven cloth 46, the tucking end 106 of the blade 56 actually being disposed within the shed as is clearly seen from Fig. 6 when it reaches the fullest extent of its projecting movement shown in said figure. Such greater movement of the blade 56 is achieved by relatively less movement of the mounting plate 35 relative to the tucking unit 20. Further, the blade 56 at all times is parallel to the unit 20 and transverse to warp wires 42, due to the pairs of actuating shafts 68 and the crank arms connected to the opposite ends thereof.

As the mounting plate 35 of the reed bar assembly is moving in the direction as described above and simultaneously is projecting the tucking blade 56 to the broken line or tucking position thereof shown in Fig. 6, the arcuate movement of actuating pin 88 will cause said pin to move slidably about the outer and upper right-hand face of the cam 90 as viewed in Fig. 6, until the pin 88, in effect, rides off of the lower right-hand edge or corner of said cam 90 as shown in the upper dotted line illustration of the cam 90 and pin 88 in Fig. 6. When this occurs, and particularly after the cam 90 has been moved somewhat further upward as viewed in Fig. 6, the pin 88 will be moved in opposite arcuate direction so as to return to the lower left-hand position thereon in Fig. 6, such action being induced by spring 78.

After the pin 88 has returned to the lower left-hand position thereof shown in Fig. 6, the cam 90 will be in the upper position shown in Fig. 6 or possibly even slightly beyond said position when the mounting plate 35 and reed bar unit 32 are disposed in fully returned position and from which position these elements will be moved when the reed bar assembly next is moved in beat-up direction so as to dispose the last inserted filling or weft wire 50 in desired position relative to the woven cloth 46. When the mounting plate 35 with its cam 90 is moved in such beat-up direction, the underface of cam 90, as viewed in Fig. 6, will engage the actuating pin 88 and ride over the same, causing the cam arm 92 to be pivotally moved clockwise against the action of spring 98. However, as soon as the cam 90 has cleared the pin 88, spring 98 will restore the cam arm 92 and its cam 90 to the lower dotted line positions thereof shown in Fig. 6, the arm 92 then resting against stop pin 102. The relationship of the cam 90 and actuating pin 88 will then be such that when the reed bar assembly 32 and mounting plate 35 next commence movement in return direction, the projection of the tucking blade 56 will take place in the manner described above, this sequence continuing all during the weaving of the cloth 46 as each weft wire 50 is woven into the cloth.

To insure that the projecting end of each newly inserted filling or weft wire 50 will be bent into substantially U-shaped configuration, as shown in Fig. 6 particularly, will remain as straight as possible, the outer or tucking end 106 of each blade 56 is provided preferably with a peripheral groove 108 formed preferably by a plurality of intersecting grooves 110 and 112. This is best shown in Fig. 7. The so-called apex or intersection 114 of grooves 110 and 112 preferably is relatively sharp so as to afford substantially only a point contact with the projecting end 52 of the filling or weft wire 50 which will afford little obstruction or friction to the easy movement

of the tucking end 106 of the blade 56 relative to said projecting end 52 of the weft wire 50. This minimizes any tendency to curve the inwardly bent portions of ends 52.

The operation of the tucking blade 56 relative to its tucking unit 20 or 22 is best illustrated in Figs 2a, 2b and 2c, wherein the right-hand unit 22 specifically is illustrated. Referring to Fig. 2a, it will be seen that the projection of the blade 56 is commencing and the outer end thereof has just effected engagement with the projecting end 52 of the last inserted weft wire 50. In Fig. 2b, greater bending of the projecting end 52 of the weft wire has taken place, while in Fig. 2c, the blade 56 has reached its fullest projection and has effected a substantially U-shaped bend in the outer end of the weft wire 50.

In Fig. 2, the blade 56 has been retracted to its inoperative position and, as a result of disengaging the fully bent projecting end 52 of the weft wire 50 as shown in Fig. 2c, the inherent resilience of the wire has caused the bent end to move slightly away from the principal portion of the weft wire 50. This position incidentally is shown to better advantage in Fig. 6. However, it will be seen that when the reed bar assembly 32 is moved an amount equivalent to the indicating line 116, the reeds 40 first engage the newly filled or inserted weft wire 50 and will move it downwardly as viewed in Fig. 6, against the bent or tucked ends 52 of the previously inserted weft wire 50 and thereby move said bent end 52 again into final, substantially U-shaped configuration, as shown otherwise in Fig. 6. During such beat-up movement of the newly inserted weft wire 50, the tucking blade 56 will be in its retracted or full line position shown in Fig. 6, thereby offering no obstruction to the movement of said weft wire as described. It is during the restoring movement of the reed bar assembly 32 to the position thereof shown in broken lines in Fig. 6 that the tucking movement of the blade 56 is effected.

From the foregoing, it will be seen that the present invention provides either a loom originally provided with tucking units or tucking units which may be attached to existing looms suitable for such adaptation thereof, said tucking units being relatively simple to construct and install in such looms and the design thereof insuring highly satisfactory tucking of projecting cut ends of weft wires so that said cut ends are satisfactorily tucked into the selvage edges of the wire cloth or fabric and thereby be firmly anchored within the cloth and also stabilize the position of the individual and separate weft wires in the cloth. The design of the tucking units is such that they are operable by simple and fool-proof actuating mechanism readily attached to or positionable upon conventional elements of a loom adapted to weave wire cloth made from individually cut weft wires. Moreover, the appearance of the selvage edge produced by the tucking units comprising the present invention closely resembles conventional wire cloth or fabric woven upon looms utilizing shuttles and bobbins for purposes of weaving the weft wires in the cloth or fabric. Further, the design of the tucking units and operating mechanism therefor is such as to insure long life and requires a minimum amount of maintenance and repair.

While the invention has been shown and illustrated in its preferred embodiment, and has included certain details, it should be understood that the invention is not to be limited to the precise details herein illustrated and described since the same may be carried out in other ways falling within the scope of the invention as claimed.

We claim:

1. Wire cloth selvage forming mechanism comprising a wire cloth weaving loom of the type constructed to position individual cut weft wires between the warp wires, said loom including a stationary frame, gripper carriers operable to position said weft wires as aforesaid with the opposite ends thereof initially projecting beyond the outermost warp wires, a reed bar unit, and harness

frames; in combination with tucking units positioned at opposite sides of the loom respectively adjacent the opposite edges of the weave of the wire cloth and interconnected to said stationary frame for support, said tucking units having blades movable into engagement with said oppositely projecting ends of the cut weft wires, actuating pins interconnected to said blades, cam means movably carried by said reed bar unit and interengageable with said actuating pins of said blades when said reed bar is moving in one direction to effect the aforesaid movement of said blades, thereby bending said projecting ends of the weft wires directly into the shed and into position to be abutted by the next inserted weft wire when beat-up thereto by said reed bar unit, said cams being movable past said actuating pins when said reed bar moves in the opposite direction.

2. Wire cloth selvage forming mechanism comprising a wire cloth weaving loom of the type constructed to position between the warp wires weft wires successively cut from a supply reel after insertion between the warp wires, said weft wires having cut ends initially projecting beyond the outermost warp wires and said loom including a stationary frame, gripper carriers operable to position said weft wires as aforesaid, a reed bar unit, and harness frames; in combination with tucking units interconnected to said stationary frame and positioned at opposite sides of the loom respectively adjacent the opposite edges of the weave of the wire cloth, said tucking units being operable to bend said oppositely projecting ends of the cut weft wires into the selvages of the cloth, a tucking blade in each unit engageable with the projecting ends of the weft wires, a pair of arms pivotally connected at one end to the blade at spaced positions longitudinally thereon and the other ends of said arms being pivotally supported by each unit to support said blades for oscillatory movement of the blades to maintain them parallel to the weft wires while moving from retracted positions adjacent the outermost warp wires into the shed, thereby bending said ends into U-shape and tucking the same into said shed, and means movable with said reed bar unit and operable to move said blades as aforesaid.

3. The mechanism set forth in claim 2 further including crank arms connected to said pivoted arms of each tucking unit, an actuating bar connecting said crank arms, an actuating pin projecting from said actuating bar, and means movable with said reed bar unit and engageable with said actuating pin to move the same and effect movement of said blade to bend the ends of said weft wires into said shed.

4. The mechanism set forth in claim 3 further characterized by said means movable with said reed bar unit comprising an arm pivotally supported by said reed bar unit and having a cam on one end engageable with said actuating pin when said reed bar unit moves in one direction, thereby effecting movement of said blade by pivotal movement of said pivoted arms to bend a projecting end of said weft wire into said shed until said actuating pin rides past said cam, and said mechanism also including means automatically to return said blade to its starting position, the pivoted mounting of said cam permitting the cam to move past said pin when the reed bar unit is moving in the opposite direction.

5. Wire cloth selvage forming mechanism comprising a wire cloth weaving loom of the type devised successively to position separate weft wires between the warp wires so that the ends of the weft wires initially project beyond the outermost warp wires, said loom including a stationary frame, gripper carriers operable to position said weft wires as aforesaid, supporting members projecting from said frame and slidably supporting said gripper carriers, a reed bar unit movably supported by said frame, and harness frames carried by said frame; in combination with tucking units positioned at opposite sides of the loom respectively adjacent the opposite edges of the weave of the wire cloth and connected to and supported

by said projecting supporting members, said tucking units each being slotted and respectively receiving the opposite edges of the woven cloth to guide and stabilize the same, each unit also including a blade operable to engage and bend one of said oppositely projecting ends of the cut weft wires into the shed of the loom, and means actuated by said loom and operable to activate said blades for movement thereof from positions adjacent the outermost warp wires and project the same laterally of the cloth edges and into the shed, thereby tucking said projecting ends of the weft wires into said shed and bending said ends substantially into U-shaped configurations.

6. The mechanism set forth in claim 5 further characterized by said blades of said tucking units being substantially flat and extending substantially transversely to the warp wires within the plane of the woven cloth and being supported movably relative to said units by means operable to effect movement of said blade in directions within said plane of said cloth to bend said ends of said weft wires into the shed while said blades are positioned substantially transversely to said warp wire, thereby effecting a wiping action between said blades and the projecting ends of said weft wires.

7. The mechanism set forth in claim 5 further characterized by said blades each having actuating pin means interconnected thereto and said reed bar unit having cam means engageable with said actuating pin means during movement of said reed bar unit in one direction to move one end of each blade into engagement with the outer ends of the weft wires to bend the same into the shed.

8. Wire cloth selvage forming mechanism comprising a wire cloth weaving loom of the type devised to position between the warp wires separate weft wires having cut ends sufficiently long to project initially beyond the outermost warp wires, said loom including a stationary frame, gripper carriers operable to position said weft wires as aforesaid, a reed bar unit, and harness frames; in combination with tucking units positioned at opposite sides of the loom respectively adjacent the edges of the weave of the wire cloth, said tucking units being operable to bend the oppositely projecting ends of the cut weft wires into positions to be woven into the selvages of the cloth and including guide slots respectively receiving selvages of the woven cloth and fixedly supported relative to the frame, tucking blades having ends engageable with said projecting ends of the weft wires, means supporting said blades for movement of said ends thereof from positions adjacent the outermost warp wires and project the same laterally of the cloth edges and into the shed, thereby tucking said projecting ends of the weft wires into the shed and bending said ends substantially into U-shaped configurations, said gripper carriers successively placing said weft wires within the shed while open, and means operable to actuate said tucking mechanism to tuck the ends of the last inserted weft wire into the shed when open while said wire is held locked between the warp wires.

9. Wire cloth selvage forming mechanism comprising

a wire cloth weaving loom of the type constructed to position between the warp wires separate weft wires having cut ends sufficiently long to project initially beyond the outermost warp wires, said loom including a stationary frame, means operable to position said weft wires as aforesaid, a reed bar unit operable to beat-up each weft wire after insertion thereof in said shed, and means to shift said shed after each weft wire is beat-up within the shed to lock said wire within the weave; in combination with heads fixed relative to said stationary frame respectively adjacent the opposite edges of the weave and having slots positioned substantially within the plane of the weave of the cloth, tucking blades positioned respectively adjacent the opposite edges of said weave and substantially within the plane of said weave, shaft means supported by said stationary frame for rotation about axes fixed relative to said frame and substantially vertical to the plane of the weave respectively adjacent the opposite edges of said weave, said tucking blades respectively being interconnected to said shaft means for oscillatory movements of the blades in opposite directions within the plane of the weave about the axes of said shaft means and respectively into and retracted from the shed of the weave, portions of said tucking blades being disposed within cavities within said heads when said blades are in one position and projectable therefrom to dispose said blades in a second position, and actuating means operable to rotate said shaft means in one direction while said reed bar is retreating from beat-up position to move said blades respectively from said one position thereof to said second position to engage the projecting ends of said locked weft wire and bend the same into the shed and to rotate said shaft means subsequently in the opposite direction to remove said blades from the shed to said one position thereof before the next inserted weft wire is beat-up into the shed.

10. The wire cloth selvage forming mechanism set forth in claim 9, further characterized by said tucking blades having grooves in one side of the outer end portions thereof to engage and insure positioning of the cut ends of the weft wires thereon while said blades slidably engage said weft ends to tuck them into the shed of the weave.

11. The wire cloth selvage forming mechanism set forth in claim 9 further including crank arm means connected to said shaft means, and said actuating means being movable relative to said frame and operable to oscillate said crank arm means to effect oscillation of said tucking blades.

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