July 24, 1928. 1,678,544

W. T. WHITAKER

HARNESS STRAP

Filed Sept. 29, 1927

Fig. 1.

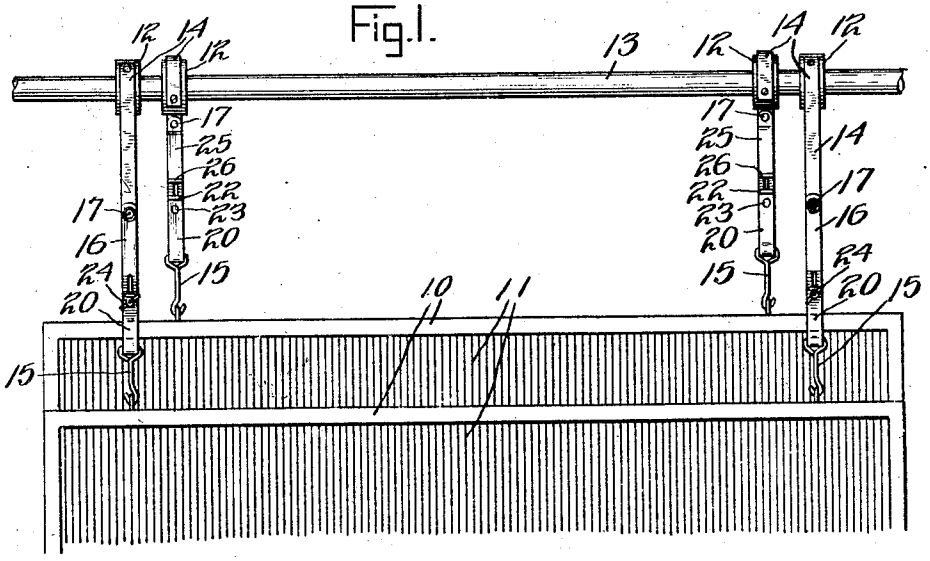


Fig. 2.

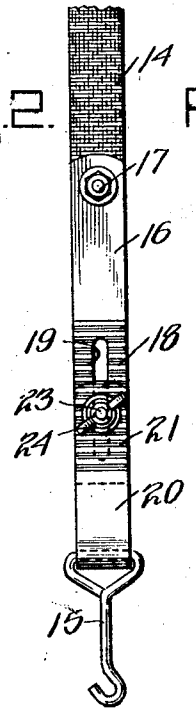


Fig. 3.

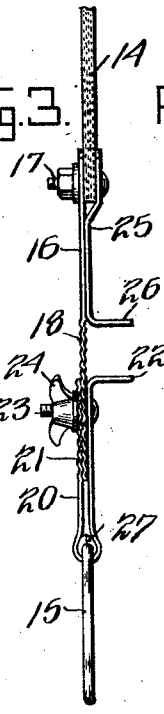
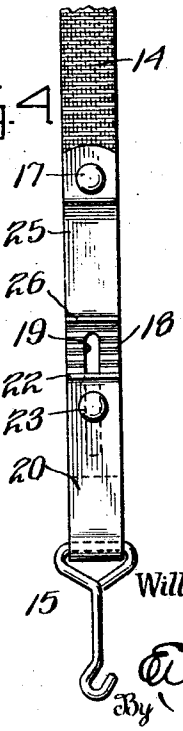


Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM T. WHITAKER, OF GREENVILLE, SOUTH CAROLINA.

HARNESS STRAP.

Application filed September 29, 1927. Serial No. 222,837.

My invention relates to loom attachments and more particularly to the straps which are used for adjustably supporting the harness frames, and it is an object of the invention to provide harness straps which are more durable in construction and which will not stretch, all as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings which are made a part hereof and on which similar reference characters indicate similar parts,

Figure 1 is a front elevation of part of a loom illustrating the application of my invention,

Figure 2, an enlarged front elevation of one of the straps,

Figure 3, an edge view, and

Figure 4, an enlarged rear elevation of one of the straps.

In the drawings reference character 10 indicates a pair of harness frames for supporting heddles 11, such frames being supported from harness rolls or sheaves 12 supported on a harness rod or shaft 13 by means of the harness straps which constitute the essence of my invention. The rolls or sheaves 12 are fixed upon the shaft 13 and the extremities of the harness straps are fixed to the rolls 12 whereby the oscillation of the shaft 11 will serve to alternately raise and lower the frames 10 during the operation of the machine.

Each harness strap comprises a flexible tightly woven non-stretchable fabric end member 14 adapted to have its upper end securely fastened to one of the harness rolls 12 and having means for adjustably connecting its lower end to a hook 15 upon the harness frame 10. Said adjustable connecting means comprises a flat rigid bar 16 of strap iron or the like having its upper end perforated for the reception of a bolt 17 which extends through the lower end of the fabric strap 14. The lower portion 18 of the strap iron bar 16 is provided with transverse serrations and with a longitudinally extending slot 19. A substantially U-shaped hook engaging member 20 is provided for cooperation with the serrated surfaces of the bar 16, said hook engaging member having one leg provided with a serrated end portion 21 and having its other leg provided with a flat portion having its extremity bent outwardly to form a finger piece 22 as shown, both of said legs being perforated for the reception of a bolt 23 and wing nut 24 by means of which the legs are clamped tightly to the serrated portion of the bar 16 in the desired position of relative adjustment.

On the side of the lower end of the fabric strap 14 opposite the bar 16 is secured, by means of the bolt 17, a flat bar 25 corresponding in width and thickness to the bar 16 but having its free end bent laterally to provide a finger piece 26 so that said finger piece and the finger piece 22 on the cooperating hook engaging member 20 may be grasped by the forefinger and thumb of the hand. When the wing nut 24 is released the finger pieces 22 and 26 may be pressed toward each other and the harness strap correspondingly shortened.

A felt or rawhide insert 27 is preferably clamped between the legs of the U-shaped member 20 about the upper portion of the hook 15. Such insert serves as a bearing for the hook and prevents the wear which would be occasioned by the metal to metal contact. Also rust will not be discharged upon the harness and injury done to the cloth.

A harness strap of this character is less expensive to produce leather being dispensed with and such strap will wear substantially five times the length of the conventional leather strap. Also my strap will not stretch and cause the loom to make mis-picks but will maintain a uniform tension of the harness and after the warps change and the harness sets it is unnecessary to give any more attention until the warp runs out.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention, and I, therefore, do not limit myself to what is shown in the drawings, and described in the specification, but only as set forth in the appended claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. A harness strap for looms comprising a fabric end piece, a hook, and means for adjustably connecting the fabric end piece and hook comprising a slotted serrated bar, a member for engagement therewith, means for binding the bar and member together, and finger pieces carried by said bar and said member whereby they may be engaged by the finger and thumb and the strap shortened, substantially as set forth.

2. The combination of a hook for supporting a loom harness frame, a bar supporting said hook and having one end provided for adjustable connection with a cooperating bar, a fabric strap carried by said cooperating bar, means for binding said cooperating bars together, and manipulating members carried by each of said bars whereby said members may be engaged by the finger and thumb and drawn together for varying the length of the strap and consequently the tension upon the harness, substantially as set forth.

3. A harness strap for looms comprising a non-stretchable flexible strap, a rigid bar bolted to said strap and provided with serrations, a hook, a rigid bar supporting said hook and having serrations for cooperation with said strap whereby said bars may be adjustably connected, means for binding said serrated surfaces together, and oppositely disposed manipulated portions carried by said bars and adapted to be engaged by the finger and thumb and drawn together for varying the adjustment between the rigid bars, substantially as set forth.

4. A harness strap for looms comprising a non-stretchable tightly woven flexible end strap, a rigid bar bolted to said strap and having a serrated surface, a substantially U-shaped clamping member adjustably connected to said bar and having a serrated surface for cooperation with the serrated surface of the bar, means for clamping the legs of the U-shaped clamping member together for fastening the parts in fixed relation, and a harness engaging hook carried by said substantially U-shaped member, substantially as set forth.

5. A device of the class described comprising a flexible non-stretchable end piece, an attaching member, a strap connection for adjustably connecting the end piece and attaching member comprising a bar having opposite sides provided with serrated surfaces and a second bar having portions resting against opposite sides of the first bar, and being provided with serrations for engagement with the serrations on the first bar, and means for clamping the members together, substantially as set forth.

6. A device of the class described comprising a non-stretchable tightly woven flexible end strap, a spaced member, and means for adjustably connecting the end strap and spaced member comprising a relatively thin metal bar bolted to said strap and stamped with serrated surfaces on both its faces, a co-operating substantially U-shaped member having one of its legs stamped to provide serrated surfaces for co-operation with the serrated surfaces of the bar, and means for clamping the members together, substantially as set forth.

In witness whereof, I have hereunto set my hand at Greenville, South Carolina, this 10th day of September, A. D. nineteen hundred and twenty-seven.

WILLIAM T. WHITAKER.