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LOOM SEAT.

APPLICATION FILED MAR. 4, 1919.

1,329,546. Patented Feb. 3, 1920.

Fig. 1

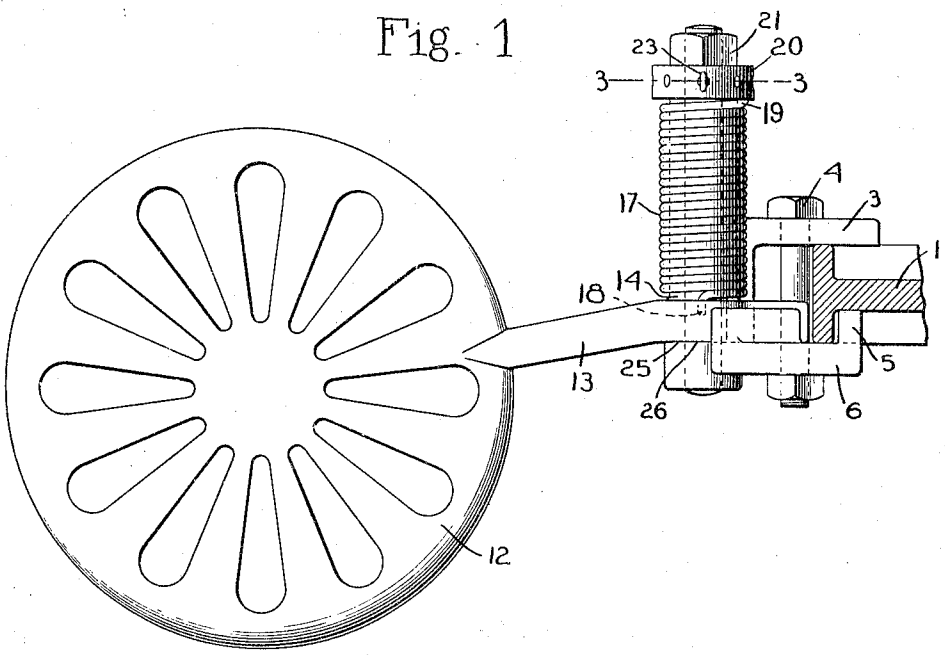


Fig. 2.

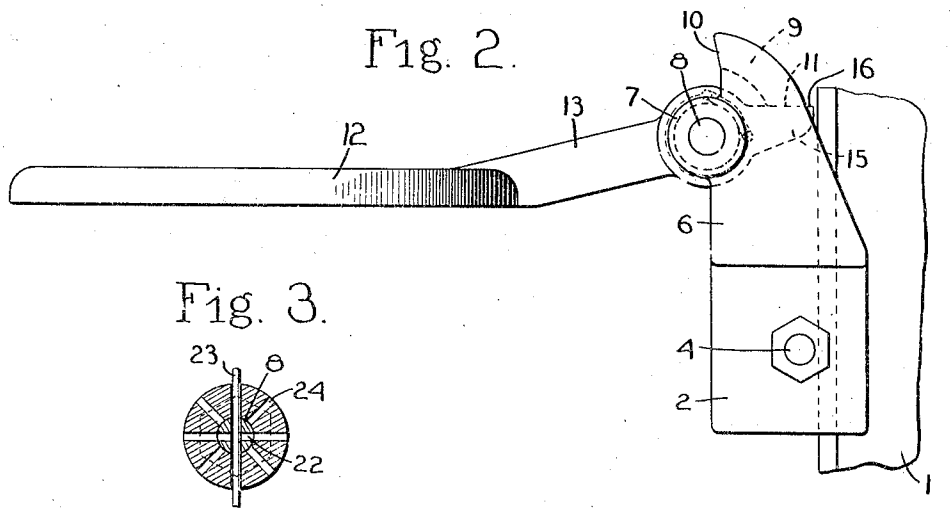


Fig. 3.

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LOOM-SEAT.

1,329,546. Specification of Letters Patent. Patented Feb. 3, 1920.

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To all whom it may concern:

Be it known that I, ALONZO E. RHOADES, a citizen of the United States, and resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Loom-Seats, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to improvements in loom seats and the object thereof is to provide an adjustable resilient means for supporting the loom seat which may be so adjusted as normally to throw the loom seat into substantially vertical inoperative position and maintain the same in such position when not in use, or which may be adjusted to permit the loom seat normally to remain in a horizontal position, but which will hold said loom seat in substantially vertical inoperative position when it is raised to said position by the operative.

A further object of the invention is to provide a resilient means of the character specified which is adapted to impose more or less frictional pressure between the loom seat and the part by which it is supported whereby the loom seat may be effectively retained either in horizontal operative, vertical inoperative, or intermediate position.

Other objects and features of the invention will more fully appear from the following description and accompanying drawings and will be particularly pointed out in the claims.

In the drawings;

Figure 1 is a plan view of a loom seat and supporting bracket embodying my invention illustrating the same as attached to a portion of the loom frame which is shown in section,

Fig. 2 is a side elevation of the same,

Fig. 3 is a sectional view through the locking collar and stud on line 3—3 Fig. 1.

While the invention is particularly adapted for a loom frame it is obviously useful in connection with other machines or structures in which it is desirable to have a movable seat which can be placed in horizontal, or operative, position and when not in use folded to a substantially vertical, or inoperative, position along the frame of the loom or other machine.

Because of the narrowness of the aisles between rows of looms in weave sheds it is desirable that a loom seat shall be provided which may be folded closely against the side of the loom when not in use and which shall be capable of being moved to a horizontal position when in use. Certain operatives prefer that the loom seat shall be automatically thrown into inoperative position when released while other operatives prefer to have the loom seat normally remain in horizontal operative position but also be capable of being released to and retained in operative position when the operative leaves the seat.

The present invention is designed to provide a seat which is capable of supplying the requirements of both these conditions.

In the preferred embodiment of the invention disclosed herein the seat is supported upon the frame 1 by a two-part bracket consisting of sections 2, 3 which are clamped upon the main frame by a bolt 4, one or both of said sections desirably having extensions or lugs 5 embracing the flange at the edge of the frame 1. The section 2 of said bracket is provided with an upward extension 6 which has a forwardly extending cylindrical boss 7 in which a stud 8 is mounted which serves as a pivot for the seat plate arm. The upward extension 6 also is provided with a rearwardly extending flange 9 presenting shoulders 10 and 11 adapted to engage the supporting arm of the loom seat when in vertical and horizontal position respectively. The loom seat comprises a circular plate of the usual type having an arm 13 which desirably is provided with a laterally extending integral sleeve 14 which is mounted upon the stud 8. The arm 13 also desirably is provided with an extension 15 which presents a shoulder 16 underlying the shoulder 11 of the flange 9 upon the bracket member 6.

In loom seats heretofore constructed resilient means such as a helical spring have been provided for holding the loom seat normally in substantially vertical inoperative position but this does not always satisfy the desire of the user. The present invention

therefore contemplates the provision of any resilient means which may be adjusted either to hold the seat normally in vertical inoperative position or to permit the seat when swung to remain in said position until it is again moved to horizontal or operative position.

In the preferred embodiment of the invention illustrated herein a helical spring 17 surrounds the sleeve 14 and is anchored at one end 18 in the arm 13 of the loom seat, the other end 19 of said spring 17 being anchored in a collar 20 which is rotatably mounted upon the stud 8.

The collar 20 desirably is provided with a square or hexagonal extension 21 which may be conveniently grasped by a wrench for the adjustment of the tension of the spring. The stud 8 is provided with two or more transverse apertures 22 adapted to receive the cotter pin 23 and the collar 20 desirably is provided with a larger number of apertures 24 to receive said cotter pin so that the collar may be adjusted to cause any one of these apertures to come into alinement with either of the apertures 22 through the stud. By reason of this adjustment any desired tension may be placed upon the helical spring 17 so that the tension of the spring may be made just sufficient to retain the seat in substantially vertical or inoperative position when raised to such position by the operative or the tension of the spring may be increased sufficiently to throw the seat immediately to the substantially vertical or inoperative position when it is released by the operative.

By reason of the fact that the ends of the helix abut at one end against the side of the arm 13 and at the opposite end against the collar 20 which is secured to the stud 8, the spring may be so constructed as to produce a pressure in a direction longitudinally of the stud so as to force the portion 25 of the arm 13 against the end 26 of the boss 7 with more or less pressure.

The friction thus imposed between the arm 13 of the seat and the boss will tend normally to hold the seat down in its operative position when the tension upon the spring is decreased just sufficiently to balance the weight of the seat but by reason of the fact that the helical spring is shortened as a greater tension is placed upon it the friction between the portion 25 of the arm and the end 26 of the boss will be somewhat decreased when sufficient tension is placed upon the spring by adjustment of the collar 20 to cause the seat normally to fly up into its substantially vertical inoperative position. It will thus be observed that the function of the spring is two-fold, first to exert a resilient action upon the arm of the seat plate which will tend normally to throw it into its vertical inoperative position and second to exert a pressure longitudinally of the pivot upon which the loom seat is mounted which will cause greater or less friction between the arm of the loom seat and the boss from which the pivotal support for said arm extends.

It will be understood that the embodiment of the invention herein is illustrative merely and not restrictive and that various changes may be made within the spirit and scope of the following claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is;

1. A folding seat for looms comprising a bracket and means for securing the same to the loom frame, a seat plate pivotally mounted upon said bracket, coöperating members upon said seat plate and bracket for supporting said seat in horizontal operative position, resilient means engaging said seat plate tending normally to raise the same into a substantially vertical inoperative position and acting also to cause frictional engagement between said seat plate and said bracket, and means for adjusting said resilient means either to cause said seat to be raised to inoperative position when released or merely to retain said seat in inoperative position when raised to it.

2. A folding seat for looms comprising a bracket having a laterally extending stud, means for securing said bracket to the loom frame, a loom seat plate having an arm pivotally mounted upon said stud, coöperating means upon said arm and bracket for supporting said loom seat in horizontal operative position, a helical spring surrounding said stud anchored at one end to said seat plate arm and rotatable adjusting means for securing the opposite end of said spring to said stud whereby the tension upon said spring may be varied to raise said seat plate to inoperative position or to retain said seat plate in inoperative position when raised to it while permitting it normally to remain in operative position.

3. A folding seat for looms comprising a bracket having a laterally extending stud, means for securing said bracket to the loom frame, a loom seat plate having an arm pivotally mounted upon said stud, coöperating means upon said arm and bracket for supporting said loom seat in horizontal operative position, a helical spring surrounding said stud anchored at one end to said seat plate arm and a collar rotatably mounted upon said stud secured to the opposite end of said spring, said collar and said stud being provided with apertures adapted when alined to receive a locking pin.

4. A folding seat for looms comprising a bracket having a laterally extending stud, means for securing said bracket to the loom frame, a loom seat having an arm pivotally

mounted upon said stud, coöperating means upon said arm and bracket for supporting said loom seat in horizontal operative position, a helical spring surrounding said stud anchored at one end to said seat plate arm, and a collar rotatably mounted upon said stud secured to the opposite end of said spring, said collar being positioned to compress the spirals of the spring together and thereby increase the friction between said seat plate arm and said bracket, and means for locking said collar in adjusted positions.

In testimony whereof, I have signed my name to this specification.

ALONZO E. RHOADES.