No. 875,104. PATENTED DEC. 31, 1907.

F. PICK.

STOP MOTION FOR LOOMS.

APPLICATION FILED JULY 19, 1905.

Fig. 1

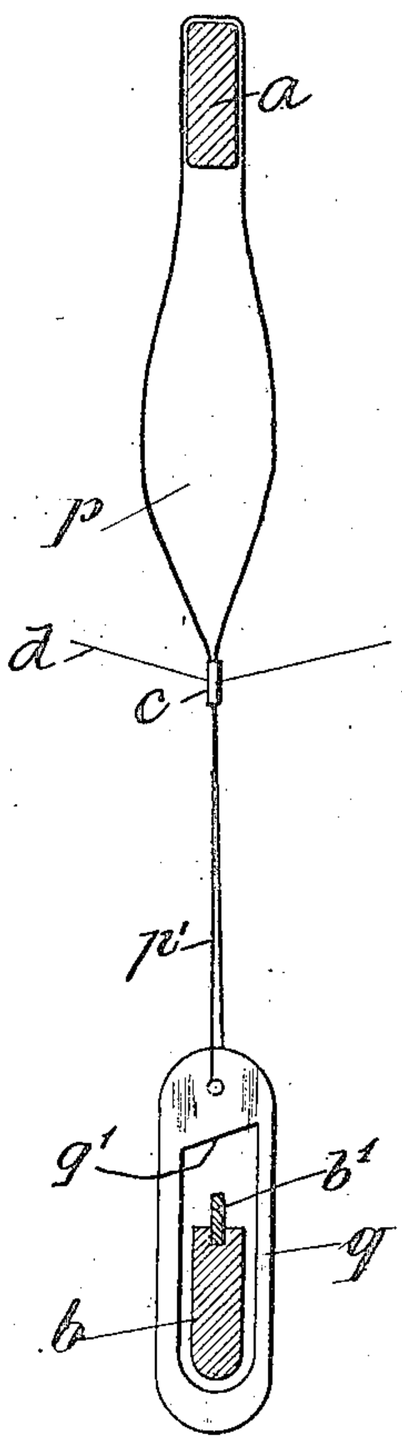
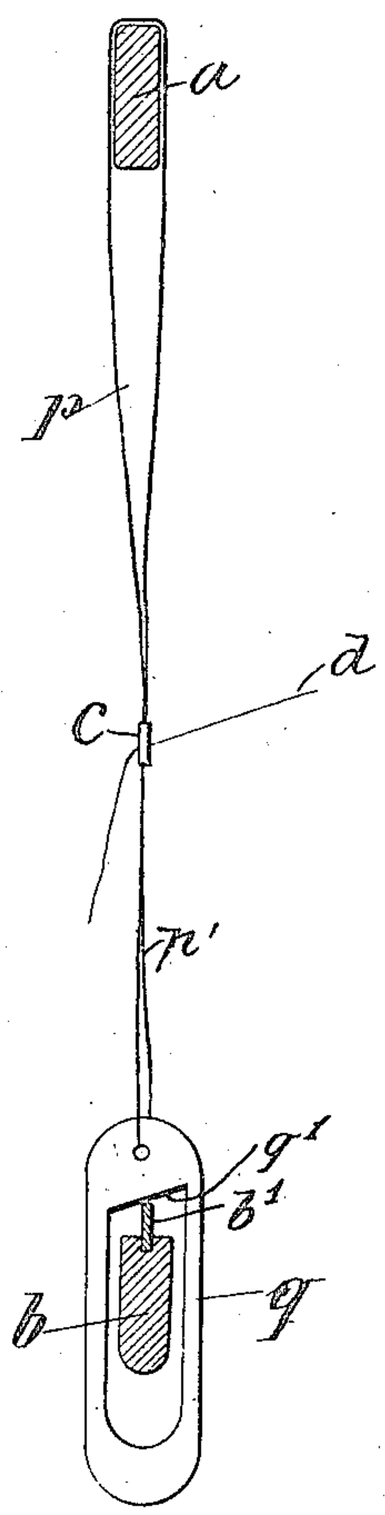


Fig. 2



Witnesses
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FRIEDRICH PICK, OF VIENNA, AUSTRIA-HUNGARY.

STOP-MOTION FOR LOOMS.

No. 875,104. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed July 19, 1905. Serial No. 270,365.

To all whom it may concern:

Be it known that I, FRIEDRICH PICK, manufacturer, citizen of the Empire of Austria-Hungary, residing at Vienna, Austria-Hungary, have invented certain new and useful Improvements in Stop-Motions for Looms, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in stop motion devices for looms and is adapted to act either mechanically or electrically in the performance of its function.

The invention broadly consists in providing the lower of two coöperating heddle bars with means assisting in arresting the operation of the loom together with coöperating means suspended from the heddle cords and forming a part of the harness.

The invention will be more fully described in connection with the accompanying drawing and will be more particularly pointed out and ascertained in and by the appended claims.

In the drawing:—Figure 1 is a vertical transverse section of two heddle bars and a heddle cord illustrating the application of my invention thereto. Fig. 2 is a similar view showing the parts in different relation.

Like characters of reference designate similar parts throughout the different figures of the drawing.

As shown:—*a* and *b* respectively designate the upper and lower heddle bars. *p* designates the heddle cord which is looped about the upper heddle bar *a* and is secured to the heddle *c* the latter serving for passage or connection with a warp thread *d*. The lower section of the heddle cord *p'* is connected at its upper end with the heddle *c* and at its lower end with a gravity acting device which as shown is in the form of a bar *q* constructed of any desired rigid material and slotted to loosely encircle the lower heddle bar *b*.

As shown in Fig. 1 the parts are in the position which they would assume in shedding the warp threads downwardly illustrating the warp thread intact while in Fig. 2 the parts are shown in a down shedding position with the warp thread broken. By reference to the drawing it will be noted that the bar *q* is slotted a sufficient length to permit a relatively considerable movement of said bar *q* with respect to the heddle bar *b* when the warp thread breaks and it will also be noted that the length of the slot of the bar *q* also permits suspension of the bar, while the parts are in a normal position, in a manner to prevent engagement between the upper slotted end of the bar *q* and the heddle bar *b*. The slot is also proportioned in such a manner as to afford a slight lateral clearance between the sides of the bar *b* and the inner lateral margins of the slotted portion. The upper end *q'* of the slotted portion is preferably inclined with respect to the horizontal and the upper margin of the heddle bar *b* is provided with means for assisting in arresting the operation of the loom which preferably consists of a contact strip or member *b'*.

When the warp thread breaks on the downshedding movement the slack in the upper section of the heddle cord permits the bar *q* to descend until the inclined portion *q'* engages the strip *b'* as clearly shown in Fig. 2 causing the lower end of the bar *q* to project a considerable distance below the heddle bar *b*. This projecting portion may be utilized in connection with any desirable form of mechanical device for stopping the loom and in this connection the strip *b'* provides a rigid support for the bar *q* and the lateral clearance spaces before mentioned affords slight movement of the bar *q* with respect to the bar *b* to prevent a sudden and therefore wearing action. It will also be noted in this connection that the inclined portion *q'* will, if the bar *q* shifts from its proper position, cause the bar *q* to move laterally to the left until its lateral margin engages the side of the heddle bar *b*. This engagement together with the engagement of the inclined portion *q'* with the strip *b'* will afford a relatively secure anchorage for the bar *q'*. It will be understood however that in some operations the inclined portion will not force the bar *q* into lateral engagement with the bar *b* but said inclined portion affords means for facilitating such engagement when necessary. If the device is employed in connection with electrical means for stopping the loom the bar *q* and strip *b'* will be formed of conducting material and will serve upon breakage of a warp thread to close circuit and stop the loom.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

1. A stop motion for looms comprising in combination, coöperating upper and lower heddle bars, a heddle cord for said bars, a

loop or ring of electrical conducting material carried by said cord and surrounding the lower bar, and a contact strip for said lower bar, the portion of the loop adapted to engage said strip being inclined.

2. A stop motion for looms comprising in combination, coöperating upper and lower heddle bars, a heddle cord for said bars, the lower bar having means for assisting in arresting the operation of the loom, and a gravity acting device normally supported by the heddle cord out of operative relation to said means and having an inclined portion serving upon breakage of a warp thread to automatically engage said means.

3. A stop motion for looms comprising in combination, coöperating upper and lower heddle bars, a heddle cord for said bars, said lower bar being provided with a contact strip, and a loop formed of conducting material carried by said cord and adapted to loosely encircle said lower heddle bar in a manner to leave an intervening clearance, said loop having an inclined portion adapted upon breakage of a warp thread to engage said strip, said clearance permitting lateral movement of said loop and effecting lateral engagement of said loop with said lower bar.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

FRIEDRICH PICK.

Witnesses:

FRIEDRICH BINDER,

ALVESTO S. HOGUE.