July 8, 1924. 1,500,466

C. POLIZZO

LOOSE REED FOR LOOMS

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Fig. 1.

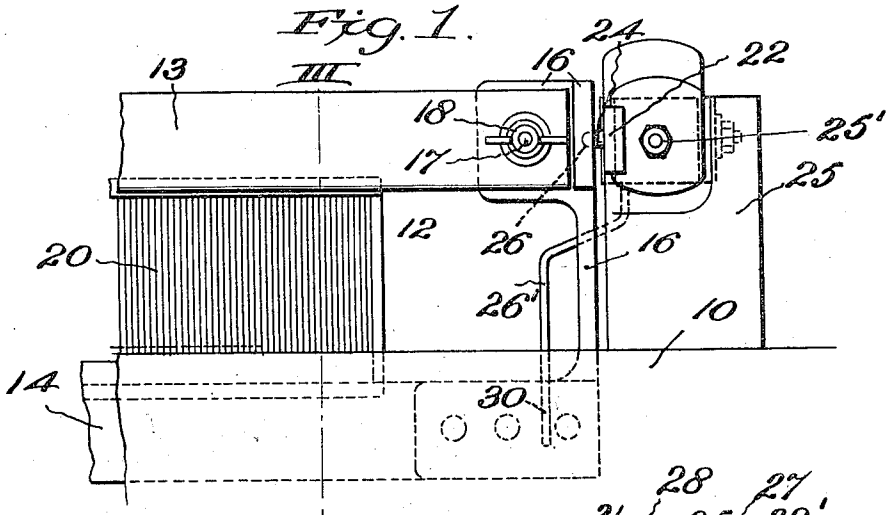
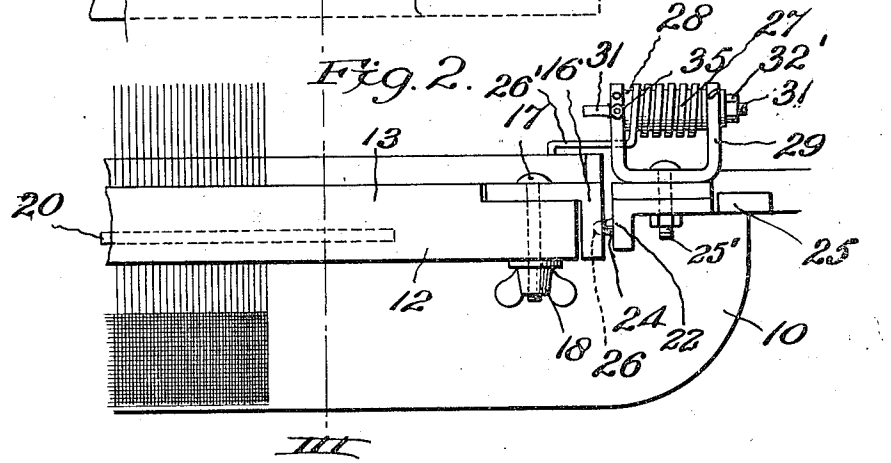


Fig. 2.



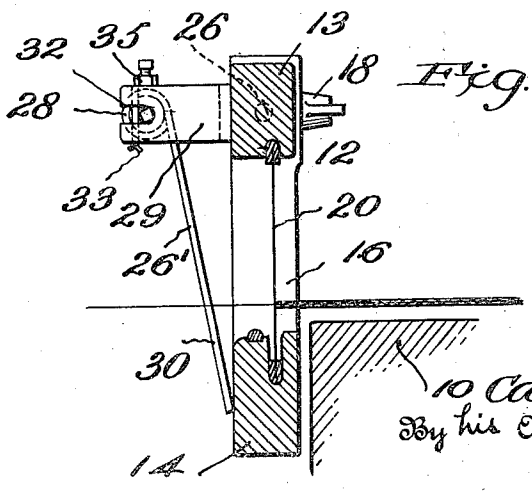


Fig. 3.

Inventor
Carmin Polizzo,
By his Attorney Geo. A. Regnier

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Fig. 4.

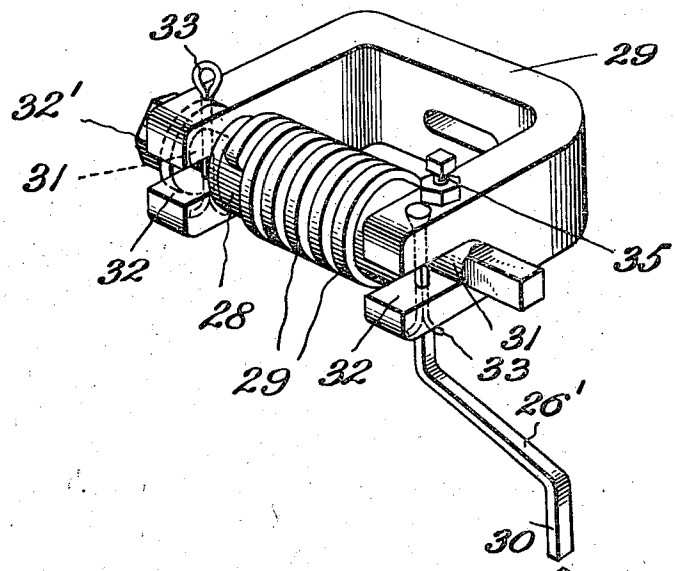


Fig. 5.

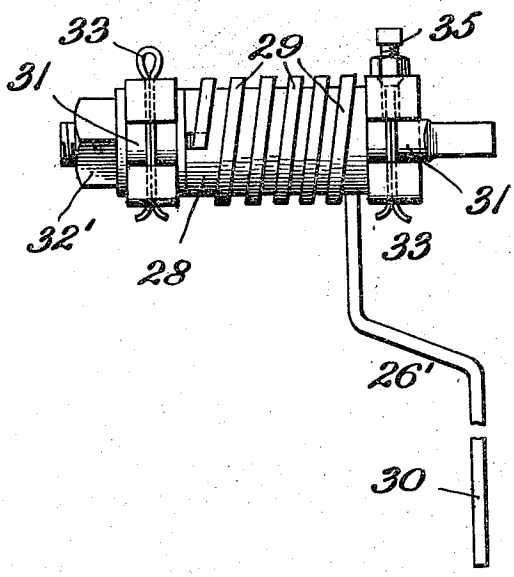
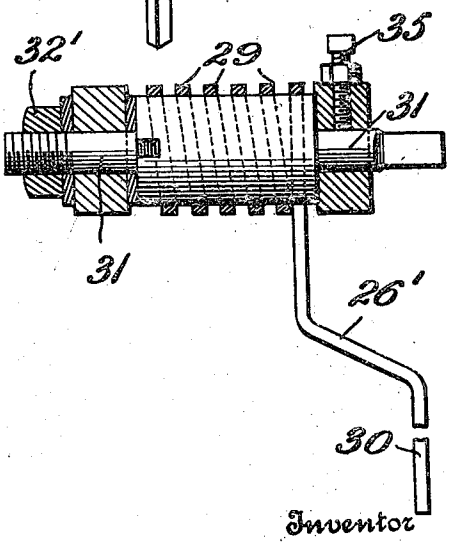


Fig. 6.



Inventor
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By his Attorney Jno. A. Byrne

Patented July 8, 1924. 1,500,466

UNITED STATES PATENT OFFICE.

CARMIN POLIZZO, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO RAPHAEL JORDAN, OF PATERSON, NEW JERSEY.

LOOSE REED FOR LOOMS.

Application filed February 10, 1922. Serial No. 535,441.

To all whom it may concern:

Be it known that I, CARMIN POLIZZO, a subject of the King of Italy, residing at Paterson, county of Passaic, State of New Jersey, have invented certain new and useful Improvements in Loose Reeds for Looms, of which the following is a specification.

This invention relates to looms, and more especially to the reed mechanism thereof.

The invention provides a reed mechanism which not only performs the ordinary function of beating up the filling in the shed, but in addition is so constructed or mounted that streaks which are found in silk, when the loom is stopped between the point where the weaving stopped and the weaving is resumed, are avoided. This streaking is due to the filling or weft thread becoming slightly displaced while the loom is stopped.

The invention further provides a relatively simple, cheap, and efficient device which may be readily and quickly connected to the batten frame for resiliently holding the reed frame against the batten frame.

An embodiment of the invention is illustrated in the accompanying drawing, in which—

Figure 1 is a view of one side of a part of a batten frame, showing the reed frame and reed therein, the parts being viewed from the shuttle side of the frame.

Figure 2 is a top plan view of the parts shown in Figure 1.

Figure 3 is a sectional view on the line III—III Figures 1 and 2.

Figure 4 is a detail perspective view of my improved means for resiliently holding the reed frame against the batten frame.

Figure 5 is a front elevational view of the device and

Figure 6 is a cross sectional view taken through the outer end of the device.

Referring to said drawings numeral 10 designates the batten frame, and 12 the reed frame. The reed frame comprises the upper and lower boards or rails 13, 14 and end-pieces 16 connecting the upper and lower rails 13 and 14. The upper rail 13 is usually made removable to receive different reeds, and a bolt 17 having a wing nut 18 serves for detachably fastening said upper rail 13 to the end piece 16. 20 designates the reed.

The reed frame 12 is attached at its upper or lower part, to the batten frame 10, preferably at its upper part, as here shown, by means of a fastening 22 permitting movement of the reed frame with relation to the batten frame. The fastening 22 conveniently comprises a stud or pin 24 in a bracket 25 on the batten frame, fitting into a hole or socket 26 formed in the end piece 16 of the reed frame, the construction being such that the reed frame can pivot or turn around the pins 24.

Means are provided for resiliently holding the reed frame 12 against the batten frame, and these means preferably comprise a stiff spring 26′ attached to a drum 28 in a U shaped stirrup 29 fastened to the bracket 25 by a bolt 25′ and bearing at its end against the lower part of the reed frame 12. The spring 26′ in the construction shown, is formed with a coiled portion 27 fitting around the drum 28 and a downwardly extending arm 30. The drum 28 has trunnions 31 at its ends, which fit in slots 32 cut in the stirrup 29, and cotter pins 33 may serve to hold the trunnions in said slots 32. One of the trunnions may be screw threaded to receive a nut 32′, as shown, and the other trunnion may be made square at its end to receive a wrench. To increase the tension of the spring 26′ and consequently its pressure on the reed frame, the drum 28 may be turned. The nut 32′ when tightened serves to hold the drum 28 from turning on its trunnions, and a set screw 35 may also be provided for a like purpose. The spring 26′ acts to hold the reed frame 12 against the batten frame, except when said reed frame is moved away against the tension of said spring when the reed in beating up a thread, meets the resistance of the woven fabric at the end of its beating up movement.

Operation.—The batten frame 10, as it reciprocates back and forth, causes the reed 20 to beat up the filler thread in the shed against the woven fabric, but the reed will move slightly away from the batten frame as it completes the beating up of the filler thread against the cloth, against the tension of the spring 26′. As the reed 20 reverses its movement however, the spring 26′ will return it against the batten frame.

When the loom is stopped for any purpose during the weaving of the cloth, the reed during the interruption will not allow

any of the already woven filling threads to become displaced, as it will be pressed against the filling thread by the spring 26′, and any slight variation in the position of the batten frame 10 less than the movement of the reed frame 12 against the tension of said spring 26′, will not act to move the reed out of holding contact with the last filler thread. Consequently when the loom restarts, there will be no irregularity in the spacing of the filler threads, and there will be no streak in the woven goods, such as is noticed in silk goods woven on previous looms, at the point where the first and last filler threads meet after an interruption or stopping of the loom.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of my invention, and, therefore, I do not wish to be limited to such features except as may be required by the claims.

What is claimed is:

1. In a loom, a batten frame, a reed frame having a reed thereon, and means for attaching said reed frame to said batten frame, said means comprising a pivotal connection between said batten frame and reed frame, and a coil spring adjacent said pivotal connection and detachably mounted on the batten frame and having one end portion pressing said reed frame around said pivot against said batten frame, said attaching means permitting said reed frame to move slightly away from said batten frame when the reed presses a filler thread against the woven fabric, said spring normally holding said reed frame pressed against said batten frame.

2. In a loom, a batten frame, a reed frame having a reed thereon, and means for attaching said reed frame to said batten frame, said means comprising a pivotal connection between said batten frame and reed frame, and a coil spring adjacent said pivotal connection and detachably mounted on the batten frame and having one end portion pressing said reed frame around said pivot against said batten frame, said attaching means permitting said reed frame to move slightly away from said batten frame when the reed presses a filler thread against the woven fabric, said spring normally holding said reed frame pressed against said batten frame, said spring having a coiled portion, and a rotatable drum on which said coiled portion is fastened, said drum being adapted to be turned to adjust the tension of said spring.

3. In a loom, a batten frame, a reed frame having a reed thereon, and means for attaching said reed frame to said batten frame, said means comprising a pivotal connection between said batten frame and reed frame, and a spring pressing said reed frame around said pivot against said batten frame, said attaching means permitting said reed frame to move slightly away from said batten frame when the reed presses a filler thread against the woven fabric, said spring normally holding said reed frame pressed against said batten frame, said spring having a coiled portion and a rotatable drum on which said coiled portion is fastened, said drum being adapted to be turned to adjust the tension of said spring, and a U-shaped stirrup for holding said drum.

4. In a loom, a batten frame, a reed frame having a reed thereon, and means for attaching said reed frame to said batten frame, said means comprising a pivotal connection between said batten frame and reed frame, and a spring pressing said reed frame around said pivot against said batten frame, said attaching means permitting said reed frame to move slightly away from said batten frame when the reed presses a filler against the woven fabric, said spring normally holding said reed frame pressed against said batten frame, said spring having a coiled portion, and a rotatable drum on which said coiled portion is fastened, said drum being adapted to be turned to adjust the tension of said spring, said drum having trunnions, one of which is squared to fit a wrench.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this third day of February, 1922.

CARMIN POLIZZO.

Witnesses:

RAPHAEL JORDAN,

JAMES JORDAN.