Feb. 6, 1934. G. J. DUPUIS 1,946,394

REED MOVING MECHANISM

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Fig. 1.

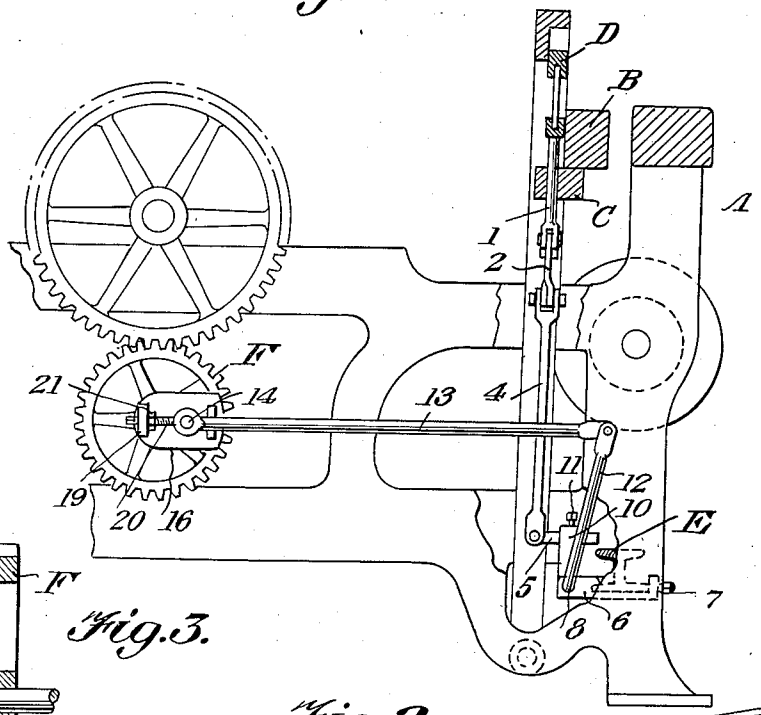


Fig. 3.

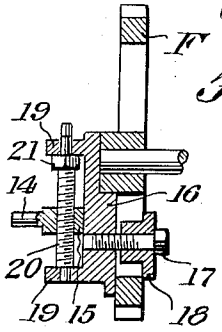


Fig. 2.

George J. Dupuis
INVENTOR

BY Victor J. Evans & Co.
ATTORNEYS

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REED MOVING MECHANISM

George J. Dupuis, Attleboro, Mass.

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3 Claims. (Cl. 139—191)

This invention relates to looms, and its general object is to provide a reed moving mechanism that is primarily designed for silk loom reeds, to cause the reed frame to reciprocate vertically, in order to prevent the threads from engaging the reeds in one place and cutting the same, with the result my mechanism will materially increase the life of the reeds.

A further object of the invention is to provide a reed moving mechanism that is actuated from a gear or other appropriate rotating element that may be a part of or attached to the loom and includes a detachable means for connection therewith, the detachable means being adjustable to vary the throw of the reed frame, to meet various conditions.

Another object of the invention is to provide a reed moving mechanism that is simple in construction, easy to apply to various types of looms, inexpensive to manufacture, and extremely efficient in operation and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side view illustrating the application of my device to a loom, and shows parts in section and in elevation.

Figure 2 is a perspective view of my device in applied position to certain parts of the loom.

Figure 3 is a sectional view taken through the intermediate gear and the actuating means for my device, which is connected thereto.

Referring to the drawing in detail, the letter A indicates a loom frame, B the lay, C a cross piece of the lay, D the reed frame, E the cross beam of the loom frame, and F a gear of the loom or a gear added thereto, or any other appropriate rotating member, it depending of course upon the type of loom with which my device is to be attached. In some looms, the gear F may be the gear between and meshing with the sand roll gear and cloth roll gear and which is generally termed the intermediate gear.

My device includes arms 1 that are secured to and depend from the reed frame as clearly shown in Figure 2 of the drawing, and these arms are provided with bifurcated lower ends which have pivotally secured therein one of the ends of levers 2 that are fulcrumed intermediate their ends to hangers 3, the latter being secured to and depending from the cross piece C.

The inner or adjacent ends of the levers 2 are pivotally secured to the upper end of a link 4 in any well known manner to allow for an ample amount of lateral displacement as will be apparent, while the lower end of the link 4 is pivotally secured to a rod 5.

Fixed to the lower cross beam E of the loom frame are bearing blocks 6, and it will be noted that these bearing blocks are recessed to accommodate the cross beam and are held accordingly thereon through the instrumentality of set screws 7.

Mounted for oscillation in the bearing blocks 6 is a horizontal portion of a rock lever 8 and secured to one end of the rock lever 8 is a collar 9 that has formed with its outer end and rising therefrom an upright block 10 which is provided with a bore to slidably receive the rod 5 that is adjustable therein and held accordingly by a set screw 11.

The rock lever 8 has formed on its opposite end an upright arm 12 which has pivotally secured to its upper end one end of a link 13 while the opposite end of the link is provided with an eye to receive a stud 14 which is formed with a cross head 15 which forms a part of the means for actuating my mechanism, and this means is secured to the gear F of the type of loom shown in a manner which will now be described.

The actuating means includes the body 16 that is recessed to accommodate the hub of the gear F as clearly shown in Figure 3 of the drawing and the body has extending therethrough a threaded bore to receive a bolt 17 that carries a clamping lug 18 whereby the actuating means is fixed to the gear.

Extending from adjacent the opposite ends of the body 16 are apertured ears 19 which rotatably receive the reduced ends of a screw 20, and the upper end of the screw 20 is squared to receive a tool for rotating the screw so as to adjust the cross heads 15 thereon. The screw is provided with a lock nut 21.

From the above description and disclosure in the drawing, it will be obvious that I have provided a reed moving mechanism that will act to vertically reciprocate the reed frame, with the result wear will be evenly distributed on the reeds and thereby materially increase the life thereof. This vertical reciprocation is brought about by the fact that the actuating mechanism is fixed to the

gear F and thereby rotates therewith. Such rotation will result in the link 13 reciprocating and this reciprocation is imparted to the rock lever 8 which will rock the rod 5 through the medium of the collar 9 and block 10, and as the rod 5 is pivotally secured to the link 4, and the link is pivotally secured to the inner ends of the levers 2 that are fulcrumed to the hangers 3, the reed frame will be vertically reciprocated and guided accordingly, due to the fact that the arms 1 are mounted for slidable movement in the cross piece C. The gear F in the type of loom shown is in mesh with a slow moving gear of the loom, and is thereby rotated accordingly to impart a slow movement to the reed frame, the throw or zone of reciprocation of which may be varied by adjusting the cross head 15.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:

1. A reed moving mechanism comprising arms secured to and depending from the reed frame of a loom, means for guiding said arms, links fulcrumed intermediate their ends and pivotally secured to said arms, a link pivotally secured to the levers, a rod pivotally secured to the link, means for adjustably receiving said rod, means for securing the rod in adjusted positions, means for rocking the adjustable securing means for the rod and including adjustable means and means for detachably securing the last mentioned adjustable means to a rotary driving means.

2. A reed moving mechanism comprising means secured to and depending from the reed frame of a loom, guiding means for the first mentioned means, hangers depending from the guiding means, levers fulcrumed to the hangers and having one of their ends pivotally secured to the first mentioned means, a link pivotally secured to the opposite ends of the levers, a rod pivotally secured to the link, bearings secured to the loom frame, a rock lever mounted in said bearings, means for adjustably securing the rod to the rock lever, an upright arm formed with the rock lever, a link pivotally secured to the upright arm, and means for detachably and adjustably securing the last mentioned link to a rotary driving means for reciprocating vertically the reed frame and to vary the throw thereof.

3. A reed moving mechanism comprising means secured to and depending from the reed frame of the loom, means for reciprocating the first mentioned means for vertically reciprocating the reed frame, means for actuating the reciprocating means and including a body, means for securing said body to a rotary driving means, ears extending from the body, a screw mounted for rotation in said ears, a cross head threadedly secured to the screw for movement between the ears, and means for connecting the cross head to the reciprocating means.

GEORGE J. DUPUIS.