Aug. 26, 1930. N. G. GLATTFELTER 1,774,435

CLOTH TEMPLE FOR LOOMS

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Fig. 1.

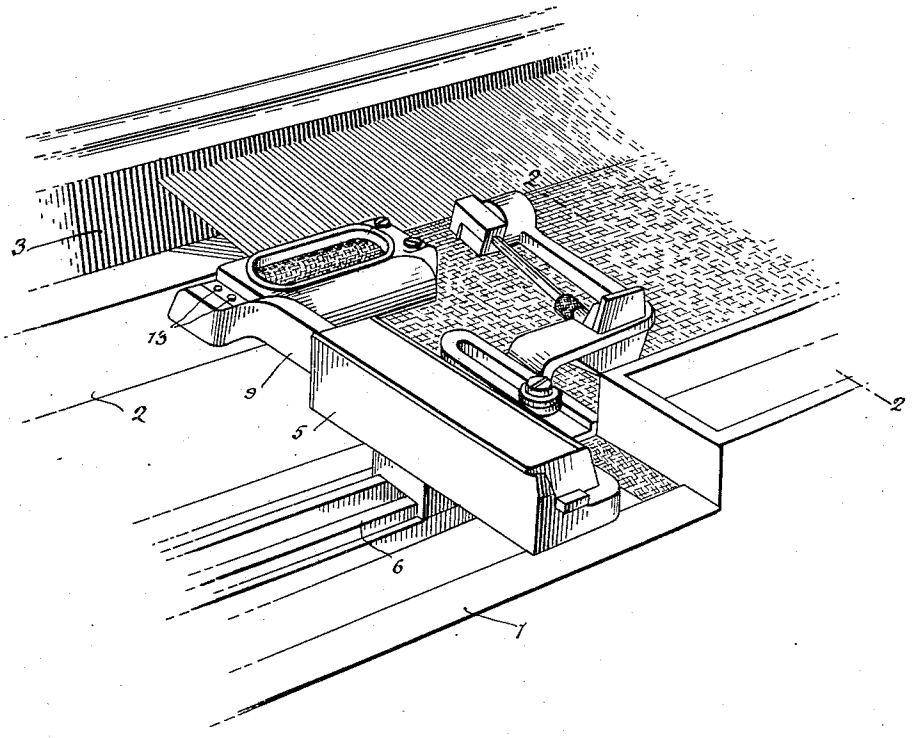
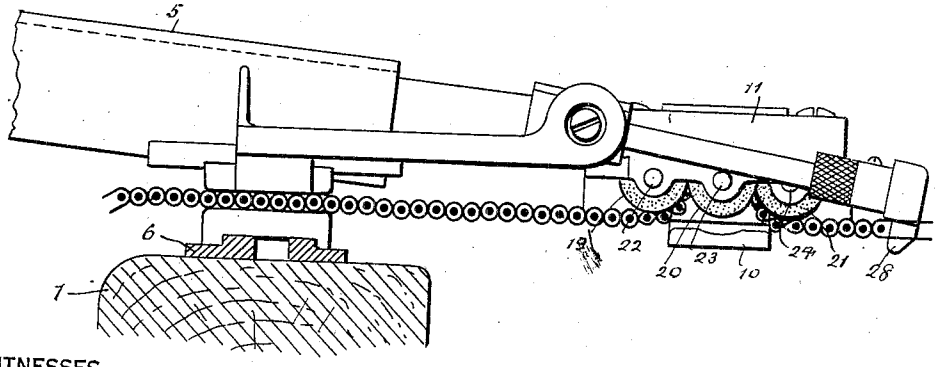


Fig. 2.



WITNESSES

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CLOTH TEMPLE FOR LOOMS

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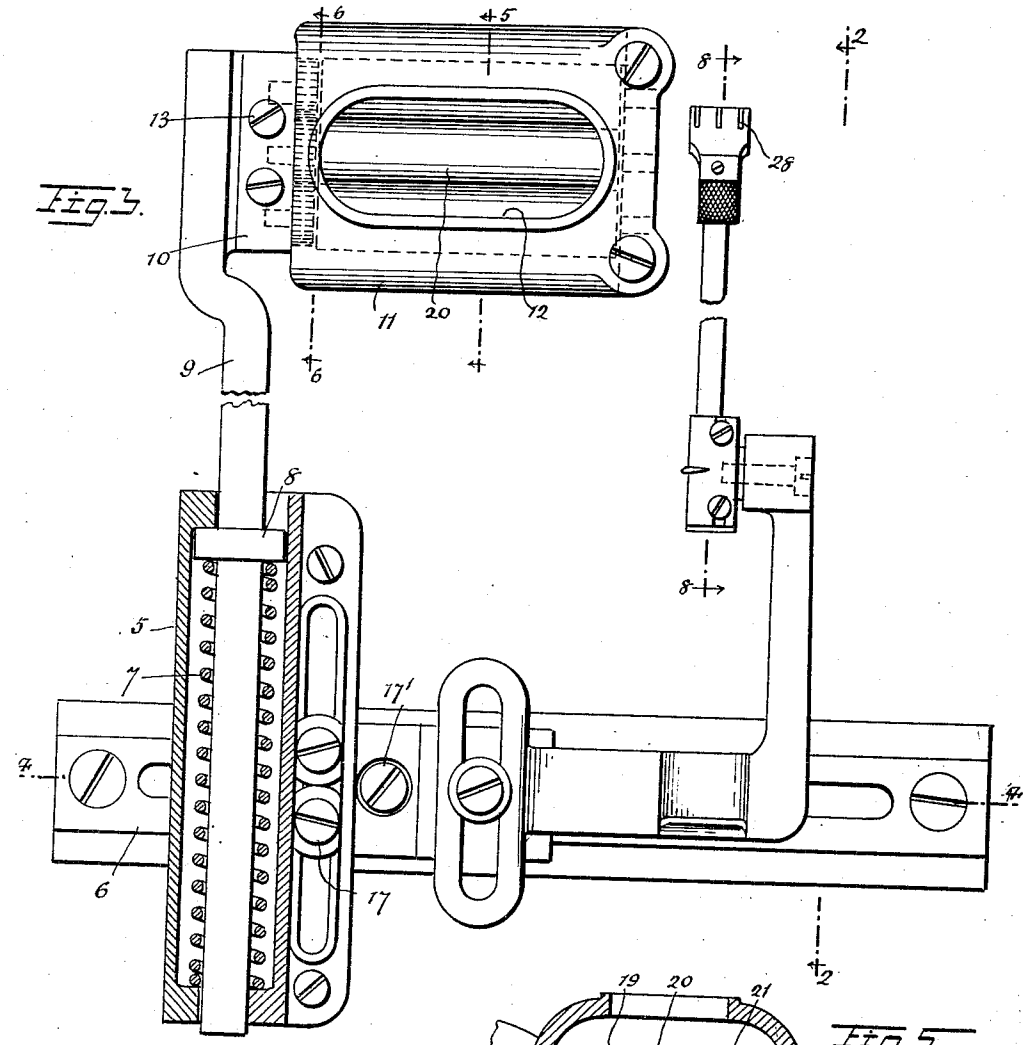


Fig. 3.

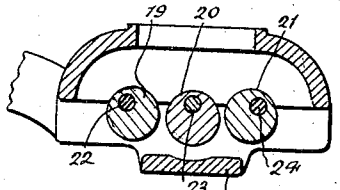
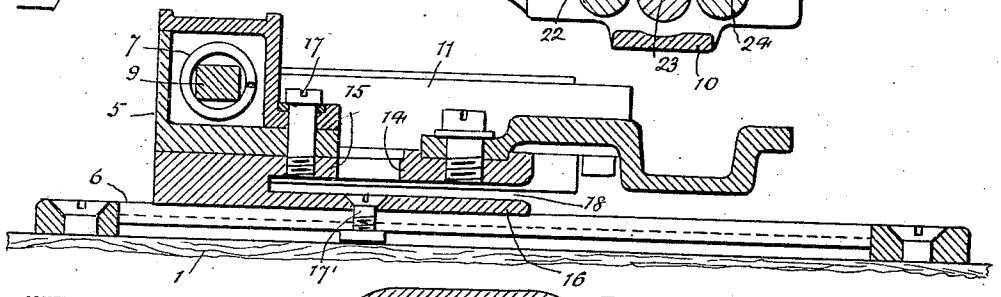


Fig. 5.

Fig. 4.



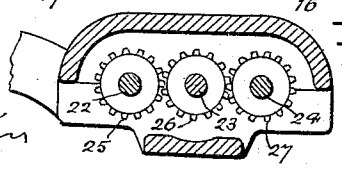


Fig. 6.

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CLOTH TEMPLE FOR LOOMS

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Fig. 7.

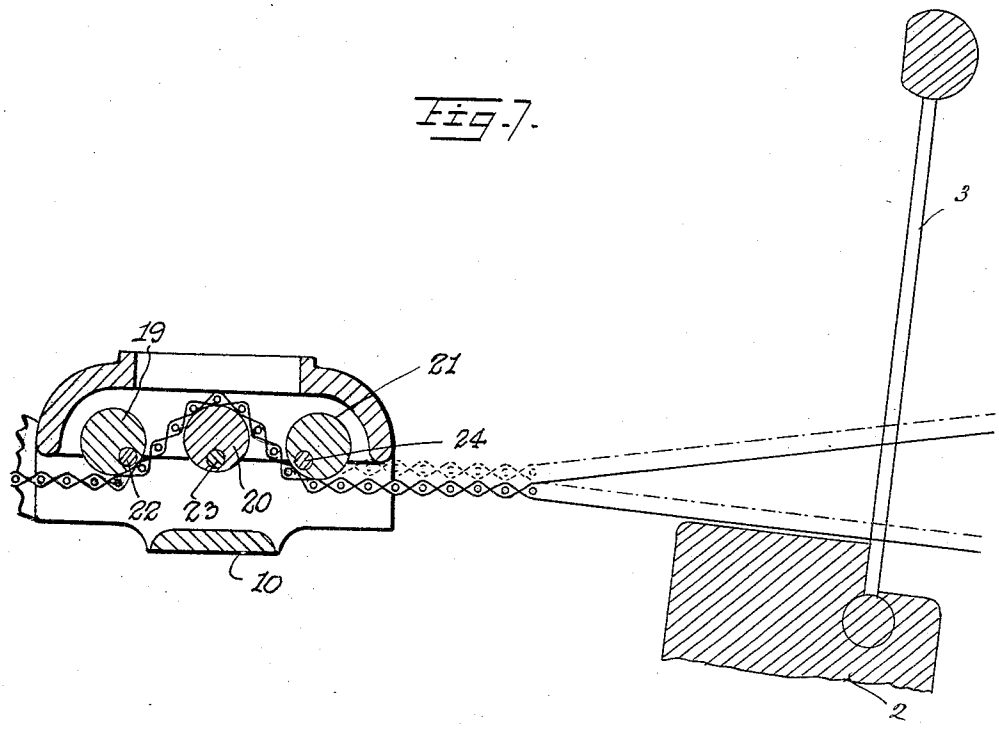


Fig. 8.

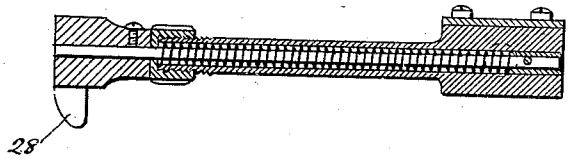
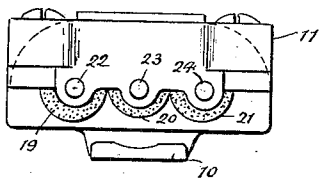


Fig. 9.



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UNITED STATES PATENT OFFICE

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CLOTH TEMPLE FOR LOOMS

Application filed August 7, 1928. Serial No. 298,116.

This invention relates to looms, and particularly to an improved automatic cloth gage and temple, the object being to provide a construction which is an improvement over my copending application, Serial No. 99,725.

Another object of the invention is to provide a combined gage and temple for looms which will cause the reed of the loom to strike the yarn at different points upon each movement.

Another object of the invention is to provide a cloth setting device which allows a weaver to set the loom properly without a tight or loose mark in combination with a temple, which keeps the cloth stretched to its fullest width, protecting the reed and at the same time preventing the filling from being cut on the edges.

An additional object, more specifically, is to provide in a loom, a temple structure including eccentrically-mounted rollers driven by true gears and set to cause the cloth to move up and down as the reeds set up the yarn.

In the accompanying drawings,—

Figure 1 is a fragmentary perspective view showing part of the front of a loom illustrating a temple and associated parts and disclosing an embodiment of the invention;

Figure 2 is a sectional view through Figures 1 and 3 approximately on the lines 2—2;

Figure 3 is an enlarged top plan view of the temple and certain associated parts shown in Figure 1, a portion being broken away for illustrating certain operating parts;

Figure 4 is a sectional view through Figure 3 on the line 4—4;

Figure 5 is a fragmentary sectional view through Figure 3 on the line 5—5;

Figure 6 is a fragmentary sectional view through Figure 3 on the line 6—6;

Figure 7 is a view partly in section and partly in outline presenting a diagram illustrating the movement of the cloth during the weaving action;

Figure 8 is a fragmentary sectional view through Figure 3 on the line 8—8.

Figure 9 is a fragmentary end view of part of the temple, the same illustrating one of the end supports for the rollers.

Referring to the accompanying drawings by numerals, 1 indicates the usual breast beam of the loom, 2 the shuttle race and 3 the usual reed. It is to be understood that the shuttle race, reed and associated parts may operate with the usual lay sword in substantially the usual manner. The other parts of the loom may be of any usual or preferred structure, so that the usual shed will be formed, as shown in Figure 7, as the loom functions.

In looms heretofore the reeds became worn in one place because the motion of the lay caused them to strike the laid-in thread always at the same place, whereby the cutting operation would be produced. In the present invention means have been provided for shifting the woven cloth and part of the shed so that the reeds will strike at a different point upon each operation, and thereby become polished rather than worn as they perform the usual setting operation. This is accomplished by an improved temple which is illustrated in the form of a diagram in Figure 7 so as to indicate the movement of the various parts.

As shown in Figure 1 and certain of the other figures, the temple 4 is provided with a desirable casing 5 which may be clamped to a suitable member 6 carried by the breast beam 1 and supporting a spring 7 acting on the abutment 8 secured to the arm 9. This arm carries an integral projection 10 and also a covering plate 11 which is provided with an opening 12 acting as an observation opening. The covering plate 11 is rigidly secured to the arm 9 by screws 13 entering the upper portion 14 of the extension 15 of arm 9. The lower portion 16 is connected to member 6 by suitable screws 17. By reason of this construction there is provided an opening or slot 18, as shown in Figure 4, whereby ample provision is made for accommodating the cloth coacting with the rollers 19, 20 and 21. These rollers are rigidly secured to the respective shafts 22, 23 and 24, but are arranged eccentrically with the rollers 22 and 24 substantially identically positioned in respect to their rollers, while the roller 20 is offset in the opposite direction, as clearly shown in Figure 7. When the cloth passes

over these rollers, as shown in Figure 7, there will be an up and down movement of the cloth and part of the shed. These rollers act in unison by reason of the fact that gear wheels 25, 26 and 27 are rigidly secured to the respective shafts 22, 23 and 24 and the gear wheels are arranged to mesh, as shown in Figure 6. The up and down movement of the cloth is not rapid but is comparatively slow, but a distinct movement is given each time the woven cloth is pulled forwardly, thus causing the reeds to be engaged at a different point. As the reeds strike the yarn at different points a polishing action will be produced rather than a wearing action, and consequently, the reeds will wear much longer than when they always strike in the same place.

As shown in Figure 3, three coacting eccentrically mounted rollers are provided, but if desired, more or even a less number of rollers may be used, if arranged to move the cloth up and down, and therefore shift the shed somewhat, whereby the desired up and down motion could be secured. If at any time it should be desired to use the loom without taking advantage of this up and down movement, the cloth could merely be passed over the tongue 10 and below all of the rollers. Ordinarily it is much more desirable to use the rollers as described. Only one temple is shown in Figure 1, but it is evident that a similar temple is to be used on the other side of the machine, so that a proper guiding up and down movement of the cloth may be secured. This up and down movement does not interfere in any way with the speed of the loom or the action of the reeds 3. In fact the temple and associated parts do not interfere with the usual action of the loom, but add certain features which cause the reeds to function in a better manner, namely, to wear for a much longer time. Associated with the rollers 19, 20 and 21 and associated parts is a swinging comb 28 useful in preventing joining marks or similar faults, as clearly described in my copending application, Serial No. 99,725.

What I claim is:—

1. A temple for looms, comprising a support adapted to be anchored to the frame of a loom, and means carried by the support for giving the cloth of the loom adjacent the shed an up and down movement as the loom functions, said means including not less than three guiding rollers, means for eccentrically mounting each roller and a train of gears for causing the rollers to rotate in unison.

2. A temple for looms, comprising a support adapted to be anchored to a stationary part of the loom, a plurality of rollers carried by the support and adapted to guide the cloth of the loom, said rollers being positioned to cause the cloth and part of the shed to move upwardly and downwardly as the cloth is moved along, and means for causing the rollers to move in unison.

3. A temple for looms, comprising a support adapted to be connected with a stationary part of the loom, three eccentrically mounted rollers carried by the support and positioned to continually engage the cloth near the shed, so that as the cloth is moved the rollers will be rotated and thereby cause the cloth to have an up and down movement and means for causing the rollers to move in unison.

4. A temple for looms, comprising a support and a plurality of rotatable and eccentrically mounted rollers positioned so that the cloth near the shed of the loom will pass over certain of the rollers and beneath the other rollers, there being not less than three, and a gear wheel connected to each of said rollers, said gear wheels meshing, whereby the rollers will move in unison.

5. A temple for looms, comprising a support, eccentrically mounted rollers carried by said support and positioned so that the cloth of the loom near the shed will pass over the central roller and under the other rollers, the central roller being eccentrically mounted in the opposite direction from the other rollers.

6. A temple for looms, comprising a support adapted to be connected with a stationary part of the loom, a plurality of eccentrically mounted rollers carried by the support and positioned so that the cloth near the shed of the loom will pass beneath certain rollers and over others, and means for connecting the rollers so that they will rotate in unison.

7. A temple for looms, comprising a support having an extension, a plurality of aligned pins carried by said extension, a roller mounted on each pin, said rollers being eccentrically mounted on the respective pins, and a gear wheel connected with each roller, each of the gear wheels being concentrically mounted on the pins and continually meshing, whereby the rollers will move in unison.

8. A temple for looms, comprising a support provided with a lateral extension having a slot through which the woven goods of the loom is adapted to pass, a plurality of rollers arranged adjacent said slot, all of said rollers being eccentrically mounted when positioned to cause the cloth near the shed to pass over certain rollers and under certain rollers, and means for causing the rollers to rotate at the same speed as the cloth is moved thereover.

9. The combination with a loom of three eccentrically mounted rollers positioned on the stationary part thereof for raising and lowering the cloth adjacent the shed so as to cause different parts of the reed to be engaged during the setting operation.

10. The combination with a loom of a temple carrying a plurality of eccentrically

mounted rollers automatically acting to raise and lower the shed and part of the cloth adjacent the shed as the loom functions so as to cause the reed of the loom to strike the yarn at different places within certain limits, and concentrically mounted gears connected with said rollers for rotating the rollers in unison.

11. A temple for looms, comprising a support including an arm and a spring resiliently holding the arm in a given position, and a plurality of eccentrically mounted rollers carried by the arm coacting with the cloth being woven for raising and lowering the same adjacent the shed.

12. A temple for looms, comprising a support, means for guiding cloth through the temple and three eccentrically mounted rotatable rollers engaging the cloth for raising and lowering the same as it moves through the temple, said raising and lowering action extending to the shed, whereby the reed in setting up the yarn will be engaged by the yarn at different places.

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