

L. MOLLART.

TAKE-UP MECHANISM FOR SLAT AND WIRE FABRIC LOOMS.

No. 541,563.

Patented June 25, 1895.

Fig. 1.

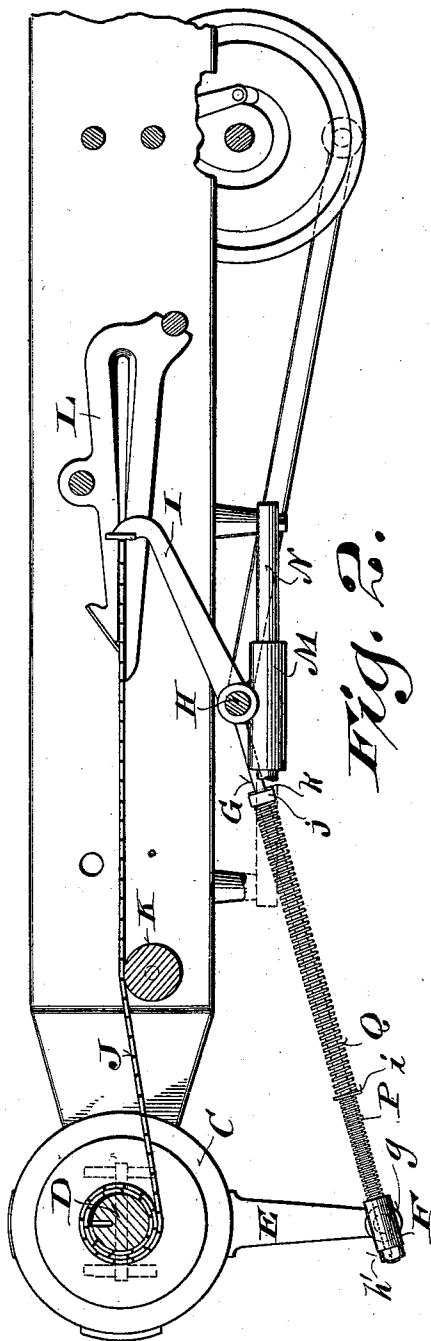
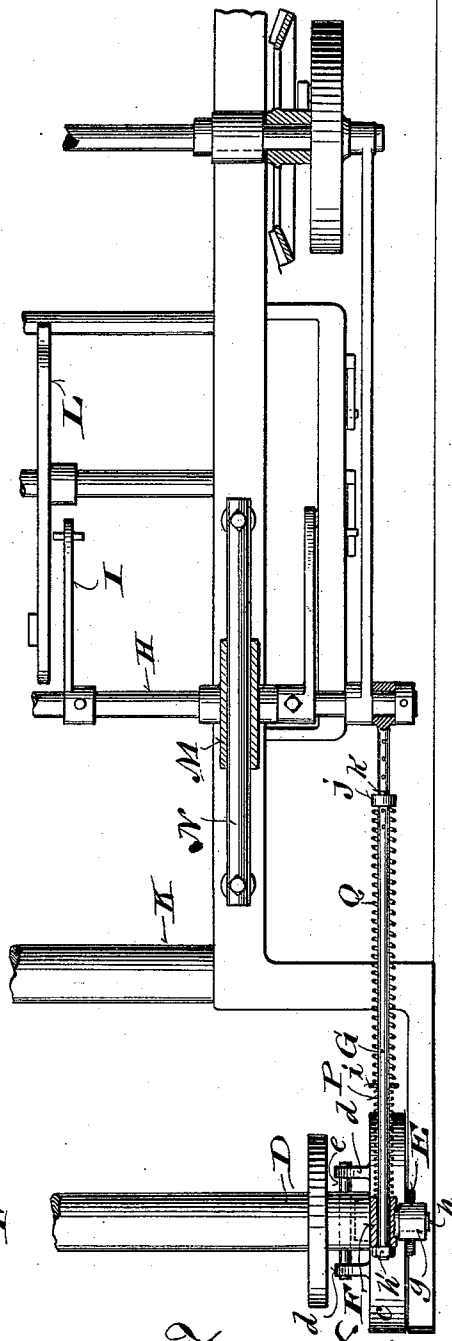


Fig. 2.



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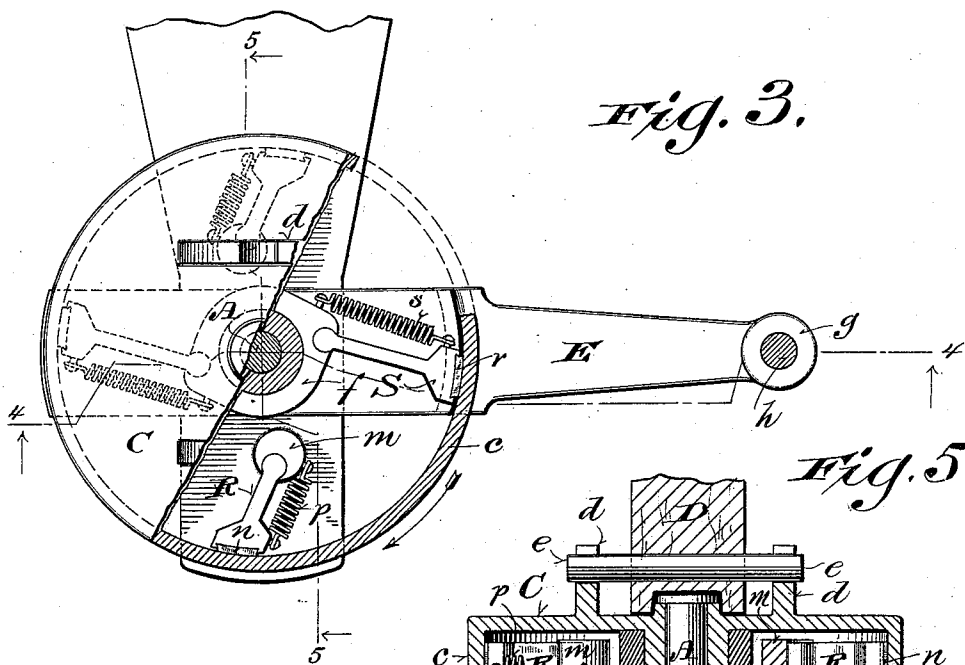


Fig. 3.

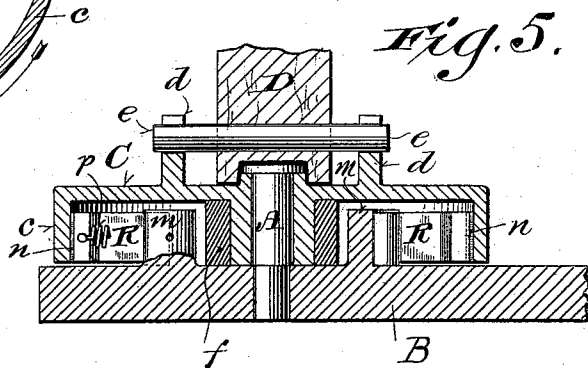
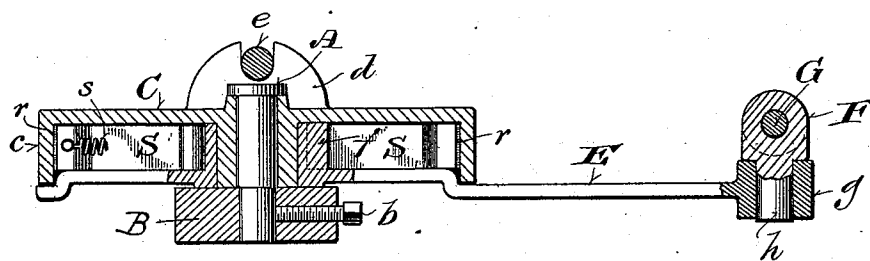


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE.

LOBEGOTT MOLLART, OF WATERTOWN, WISCONSIN, ASSIGNOR TO CHARLES E. PARKS, OF SAME PLACE.

TAKE-UP MECHANISM FOR SLAT-AND-WIRE FABRIC LOOMS.

SPECIFICATION forming part of Letters Patent No. 541,563, dated June 25, 1895.

Application filed November 30, 1894. Serial No. 530,355. (No model.)

To all whom it may concern:

Be it known that I, LOBEGOTT MOLLART, a citizen of the United States, and a resident of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Slat-and-Wire Fabric Looms; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to improve the take-up mechanism of slat-and-wire fabric looms such as is set forth in Patent No. 517,058, dated March 27, 1894; and it consists in certain peculiarities of construction and combination of parts hereinafter specified with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a plan view of my improved take-up mechanism applied to a slat-and-wire fabric loom of that description set forth in the aforesaid patent. Fig. 2 is an elevation of the same with certain of the parts in section. Fig. 3 is a detail plan view of said mechanism partly broken away and in section; and Figs. 4 and 5 are sectional views, respectively, taken on lines 4-4 and 5-5 of Fig. 3.

Referring by letter to the drawings, A represents a vertical stud held by a set-screw *b* against rotation in the loom-base B, and loose on this stud is the hub of a circular disk C having a depending flange *c*, the disk being provided with notched ribs *d* for the engagement of a pin or the ends of lugs *e* extending laterally from a longitudinal slotted roller D that is stepped on said disk to turn therewith, this connection of the roller and disk being substantially the same as shown and described in the patent above noted.

Loose on the disk-hub is the hub *f* of a lever E that opposes the edge of the disk-flange at two points in opposite directions from said hub. The rear end of the lever is provided with an eye *g* for the engagement of a boss *h* extending from a sleeve F on a link-rod G, the latter being in loose connection with the lower end of the reciprocative rod H to which the beater-arms I of the loom are attached.

Like in the above named patent, the fabric J produced by the loom is run over a supporting roller K and wound on the roller D

herein specified. It is also to be understood that the slat and fabric guides L, the cross-head M engaged by the rod H, the guide N for the cross-head, and the drive-mechanism herein shown are similar to like parts in said patent.

A nut *h'* run on the forward end of the link-rod G prevents the latter from pulling through the sleeve F when the beater-rod H is on its rear travel, and said link-rod is herein shown as surrounded by two spiral-springs P, Q, of a different power arranged in successive order and separated from each other by a washer *i*, these springs being intermediate of a collar *j* and said sleeve. In order to vary the spring-tension, the collar *j* is adjustable on the link-rod G and a pin *k* run through any one of a series of perforations in the rod serves to hold said collar in adjusted position. While I obtain a better tension by employing two springs of different power, it is practical to utilize a single spring as part of the improved take-up mechanism herein set forth.

The loom-base herein shown is provided with vertical bosses *m* having lengthwise grooves engaged by rounded inner ends of a pair of dogs R having friction blocks *n* in their outer ends faced against the inside of the flange *c* that depends from the disk C above specified. The bosses are eccentric to the stud A above specified and a spring *p* connects each boss and the dog engaged therewith. The hub *f* of the lever E is also provided with lengthwise grooves, eccentric to the stud A, and these latter grooves are engaged by rounded inner ends of a pair of dogs S having friction blocks *r* in their outer ends facing the inside of the disk-flange *c*, springs *s* being employed to connect the latter dogs and lever-hub.

The dogs in pivotal connection with the lever are intermediate of those in like connection with the loom-base and the springs in connection with the several dogs act by contraction to keep said dogs in contact with the opposing disk-flange and compensate for wear. Each pair of dogs operate to clutch the disk and that pair of said dogs on the loom base hold the disk against rotation except at such times as the lever E is on its forward throw. While I have shown the bosses *m* on the loom-base as will be the practice in constructing

new looms, they may be on a separate plate secured by any suitable means on the base of a loom as now built according to the patent herein noted.

5 In practice when the reciprocative beater-rod H is on its forward travel the link-rod G and springs thereon are moved in the same direction. Consequently if these springs are of sufficient tension the lever E is thrown forward to effect a clutch-action of the dogs S on the adjacent flange of disk C and thereby impart rotary motion to said disk and fabric-roller in lock therewith. On the reverse movement of the beater-rod and lever the dogs R clutch the adjacent flange while the other dogs S slip loose thereon, whereby the disk and fabric-roller are held stationary. Hence it will be seen that there is an intermittent rotation of said disk and fabric roller coincident with the forward travel of said beater rod to take up slack in the fabric.

As the fabric accumulates on the roller D the spring-tension is proportionately increased from time to time by adjusting the collar J on the link-rod whereby I insure the intermittent rotation of the disk to which said roll is coupled. It is also to be noticed that as the fabric-roll grows larger less throw of the lever E is necessary and hence when there has been sufficient movement of said roll to take up the slack the link-rod G is free to move in the sleeve F while the beater-rod H is completing its forward throw.

By suitable adjustment of the spring-tension herein set forth the fabric may be woven close or otherwise at will, the tension being greatest for open woven fabric.

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

1. In a loom for weaving slat-and-wire fabric, a take-up mechanism comprising a fabric roller, a rotative and flanged circular disk coupled to the roller, pivotal spring-controlled clutch dogs on the loom frame exertive against the disk flange, a lever having the same axis as the disk, other pivotal spring-controlled clutch-dogs on the lever also exertive against said disk-flange, a link-rod in slip-connection with said lever and coupled to the reciprocative beater rod of the loom, and a spiral-spring on the link-rod exertive against the aforesaid lever, substantially as set forth.

2. In a loom for weaving slat-and-wire fabric, a take-up mechanism comprising a fabric roller, a rotative and flanged circular disk coupled to the roller, pivotal spring-controlled clutch-dogs on the loom-frame exertive against the disk-flange, a lever having the same axis as the disk, other pivotal spring-controlled clutch-dogs on the lever also exertive against said disk-flange, a link-rod in slip-connection with said lever and coupled to the reciprocative beater-rod of the loom, and two spiral-springs of different power on the link-rod exertive against the aforesaid lever, substantially as set forth.

3. In a loom for weaving slat-and-wire fabric, a take-up mechanism comprising a fabric-roller, a rotative and flanged circular disk coupled to the roller, pivotal spring-controlled clutch-dogs on the loom-frame exertive against the disk-flange, a lever having the same axis as the disk, other pivotal spring-controlled clutch-dogs on the lever also exertive against said disk-flange, a link-rod in slip-connection with said lever and coupled to the reciprocative beater-rod of the loom, a spiral spring on the link-rod exertive against the aforesaid lever, and suitable means for adjusting the tension of the spring, substantially as set forth.

4. In a loom for weaving slat-and-wire fabric, a take-up mechanism comprising a fabric-roller, a rotative and flanged circular disk coupled to the roller, pivotal spring-controlled clutch-dogs on the loom frame exertive against the disk-flange, a lever having the same axis as the disk, other pivotal spring-controlled clutch-dogs on the lever also exertive against said disk-flange, a link-rod in slip-connection with the lever and coupled to the beater-rod of the loom, two spiral springs of different power successively arranged on the link-rod to exert their power against the aforesaid lever, a collar adjustable on said link-rod against the rear spring, and a pin engageable with any one of a series of perforations in the aforesaid link-rod to hold the collar in adjusted position, substantially as set forth.

5. In a loom for weaving slat-and-wire fabric, a take-up mechanism comprising a fabric-roller, a rotative and flanged circular disk coupled to the roller, pivotal spring-controlled clutch-dogs on the loom frame exertive against the disk-flange, a lever having the same axis as the disk, other pivotal spring-controlled clutch-dogs on the lever also exertive against said disk-flange, a sleeve having a boss engageable with an eye in the lever, a link-rod loose in the sleeve and coupled to the reciprocative beater-arm of the loom, and a spring on the link-rod in rear of said sleeve, substantially as set forth.

6. In a loom for weaving slat-and-wire fabric, a stud on the loom frame, a circular flanged disk having a hub loose on the stud, stationary bosses eccentric to the stud, spring-controlled clutch-dogs in pivotal connection with the bosses and exertive against the disk-flange, a lever having a hub loose on that of the disk, other spring-controlled clutch-dogs in pivotal connection with the lever-hub and also exertive against said disk-flange, a link-rod in slip-connection with the lever and coupled to the reciprocative beater-rod of the loom, a spiral spring on the link-rod exertive against said lever, and a fabric-roller coupled to the aforesaid disk, substantially as set forth.

7. In a loom for weaving slat-and-wire fabric, a stud on the loom-frame, a circular-flanged disk having a hub loose on the stud, stationary bosses eccentric to the stud, spring-

controlled clutch-dogs in pivotal connection
with the bosses and exertive against the disk-
flange, a lever having a hub loose on that of
the disk, other spring-controlled clutch-dogs
5 in pivotal connection with the lever hub and
also exertive against said disk-flange, a sleeve
having a boss engageable with an eye in the
lever, a link-rod loose in the sleeve and cou-
pled to the reciprocative beater-rod of the
10 loom, and spiral-springs of different power

adjustable as to tension on the link-rod in
rear of said sleeve, substantially as set forth.

In testimony that I claim the foregoing I
have hereunto set my hand, at Watertown,
in the county of Jefferson and State of Wis- 15
consin, in the presence of two witnesses.

LOBEGOTT MOLLART.

Witnesses:

AMOS BAUM,
CHAS. E. FREY.