(No Model.)

O. W. SCHAUM.

SPOOL HOLDING BRACKET FOR LOOMS.

No. 445,514. Patented Jan. 27, 1891.

FIG. 1.

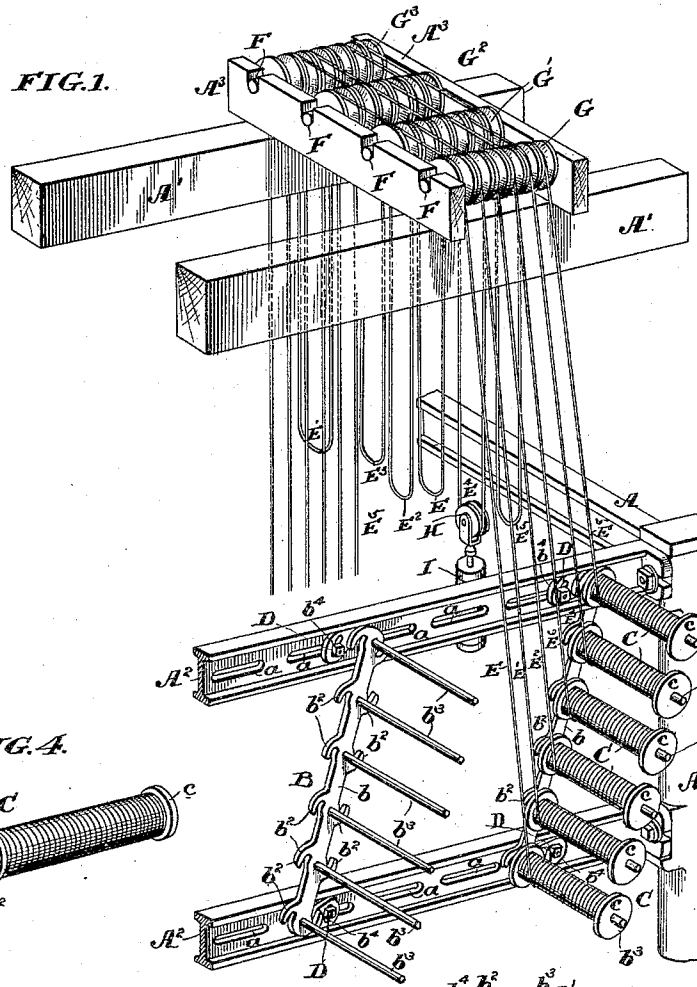


FIG. 4.

FIG. 2.

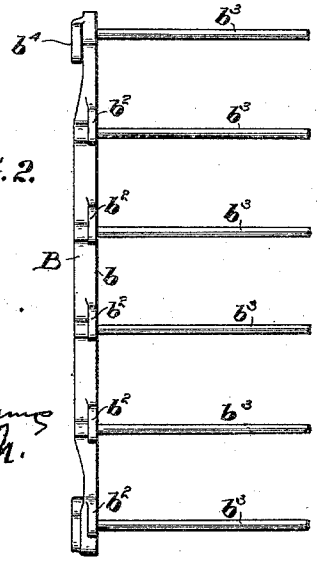


FIG. 3.

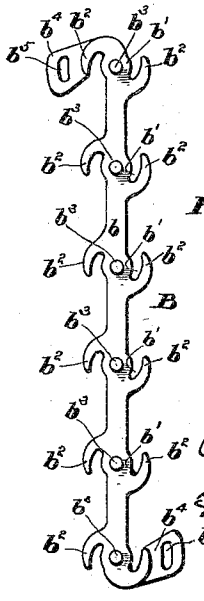
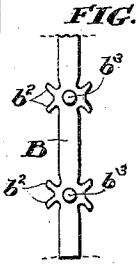


FIG. 5.



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OTTO W. SCHAUM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO SCHAUM & UHLINGER, OF SAME PLACE.

SPOOL-HOLDING BRACKET FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 445,514, dated January 27, 1891.

Application filed March 17, 1890. Serial No. 344,081. (No model.)

To all whom it may concern:

Be it known that I, OTTO W. SCHAUM, of the city and county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Spool-Holding Bracket for Looms, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of spool-holders for looms, and has for its object to provide an improved bracket whereon the spools holding the warp-threads may be conveniently secured and adjusted.

The nature of my invention will be best understood as described in connection with the drawings, wherein it is illustrated, and the novel features which I desire to claim are clearly set forth in the claims.

In the drawings, Figure 1 is a perspective view showing some parts of the frame of a ribbon-loom with my new bracket secured to it, and showing also the way in which the warp-threads are led from the spools. Fig. 2 is a side elevation of one of my improved spool-holding brackets; Fig. 3, a front elevation thereof; Fig. 4, a perspective view of one of the spools adapted to be used with my bracket, and Fig. 5 a view showing a modification of my improved bracket.

A A, A′A′, A^2 A^2, and A^3 A^3 are parts of the frame of the loom.

B is my improved bracket, consisting of a narrow metallic bar *b*, with rods b^3 secured permanently in and projecting from it to hold the spools. The bracket is preferably slightly enlarged, as shown at *b′*, where the rods are secured, and on each side of the bar lugs b^2 b^2 are formed to serve as stops, in the way hereinafter described. At each end of the bar are formed lugs b^4, with slots b^5, by which the bracket is secured to the parts A^2 A^2 of the frame, as shown in Fig. 1.

C C, &c., are the spools which are secured upon my improved bracket. They are formed with heads *c* and a perforation *c′*, in the usual way, and have projecting from one head a pin c^2 at such a distance from the hole *c′* that when the spool is slipped over a rod b^3 the projecting pin c^2 will extend out beyond the bar *b* on either side and be caught by one of the lugs b^2, thus preventing the spool from rotating.

D D indicate bolts and nuts by which the bracket B is secured in the parts A^2 A^2 of the frame, the bolts passing through slots *a* and through the slots b^5.

E, E′, E^2, E^3, E^4, and E^5 are warp-threads leading from six spools secured upon one of my brackets and passing over the sets of rollers indicated at G, G′, G^2, and G^3. There are six rollers in each set to correspond with the number of warp-threads, and each set is journaled on a rod F, which is secured to the parts A^3 A^3 of the frame.

The warp-threads are arranged as follows: Thus the thread E^5, leading from the upper spool on the bracket, passes over the roller of the set G, then downward to form a loop, upward over a roller in set G′, and over rollers in sets G^2 and G^3, thence downward and over the mechanism (not shown) which stretches it out and manipulates it in proper position for weaving. The thread E^4 from the second spool on the bracket passes over a roller in set G, over a roller in set G′, then down, forming a loop, up over rollers in sets G^2 and G^3, and downward, as in the case of the first one. The other threads are arranged as is clearly shown in Fig. 1, the purpose of the arrangement being to effect a staggered arrangement of the downwardly-extending loops, in each of which a pulley H is secured, from which pulley extends a weighted rod I, the function of which is to hold the thread tight while permitting it to be drawn up as the operation of weaving proceeds.

In the drawings, Fig. 1, the loops to which the weighted pulleys are attached are shown as much shorter than they are in practice, this being done merely to save space in the drawings. It is important that the pulleys and weights should be kept as nearly in the same level as is possible, so that adjacent threads will not brush against them, and by my device, by which the spool can be caught at either side of its supporting-bracket, I am enabled to make a nicer adjustment than has heretofore been practicable in devices of this kind.

Instead of having two detents, one on each side, I can, if desired, have four, as shown in

Fig. 5, two on each side of the bar b, thus enabling the spool to be adjusted to quarter-turns as well as half-turns, and keeping the weighted pulleys still more nearly at a level.

By my new construction the spool-holding rods b^3 are firmly secured to the bracket, forming a permanent part thereof, the spools C are readily slipped upon said rods, and by engaging the pin c^2 with one of the lugs b^2 the spool is held securely in place and prevented from turning. When it is desired to let out more thread, the spool is drawn out until its pin c^2 is free of the detent-lug, and it is then turned to unwind the desired amount of thread and pushed back to engage again with a lug b^2. The described arrangement of these lugs, as already stated, enables the spool to be held in any desired position to make a nice adjustment of the length of the thread, and the whole device is simple and in no wise likely to get out of order or give trouble in adjustment.

In my former patent, No. 412,421, dated October 8, 1889, I have shown and described spool-holding frames which are similar to those here described with respect to their general form and the provision made for attaching them to the loom. In my said former device, however, the spool-holding pins were removable, the spools being fast or jammed on the pins, and the pins secured in non-circular holes in the frame, so that when it was desired to let off more thread the pin and spool were removed together from the frame, the thread let off, and the pin then reinserted in its socket. In my present device, as above noted, the pin is permanently secured to the frame and the spool free to rotate upon it at all times, save when it is engaged with one of the lugs on the frame.

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

1. As a new article of manufacture, a spool-bracket B, having spool-holding rods b^3 projecting from its center, its breadth less than that of the spool-heads, and detents upon each side thereof to engage a pin projecting from the spool-head, all substantially as and for the purpose specified.

2. As a new article of manufacture, a spool-bracket B, having spool-holding rods b^3 projecting from its center, its breadth less than that of the spool-heads, detents upon each side thereof to engage a pin projecting from the spool-head, and slotted lugs b^4 extending from each end, all substantially as and for the purpose specified.

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