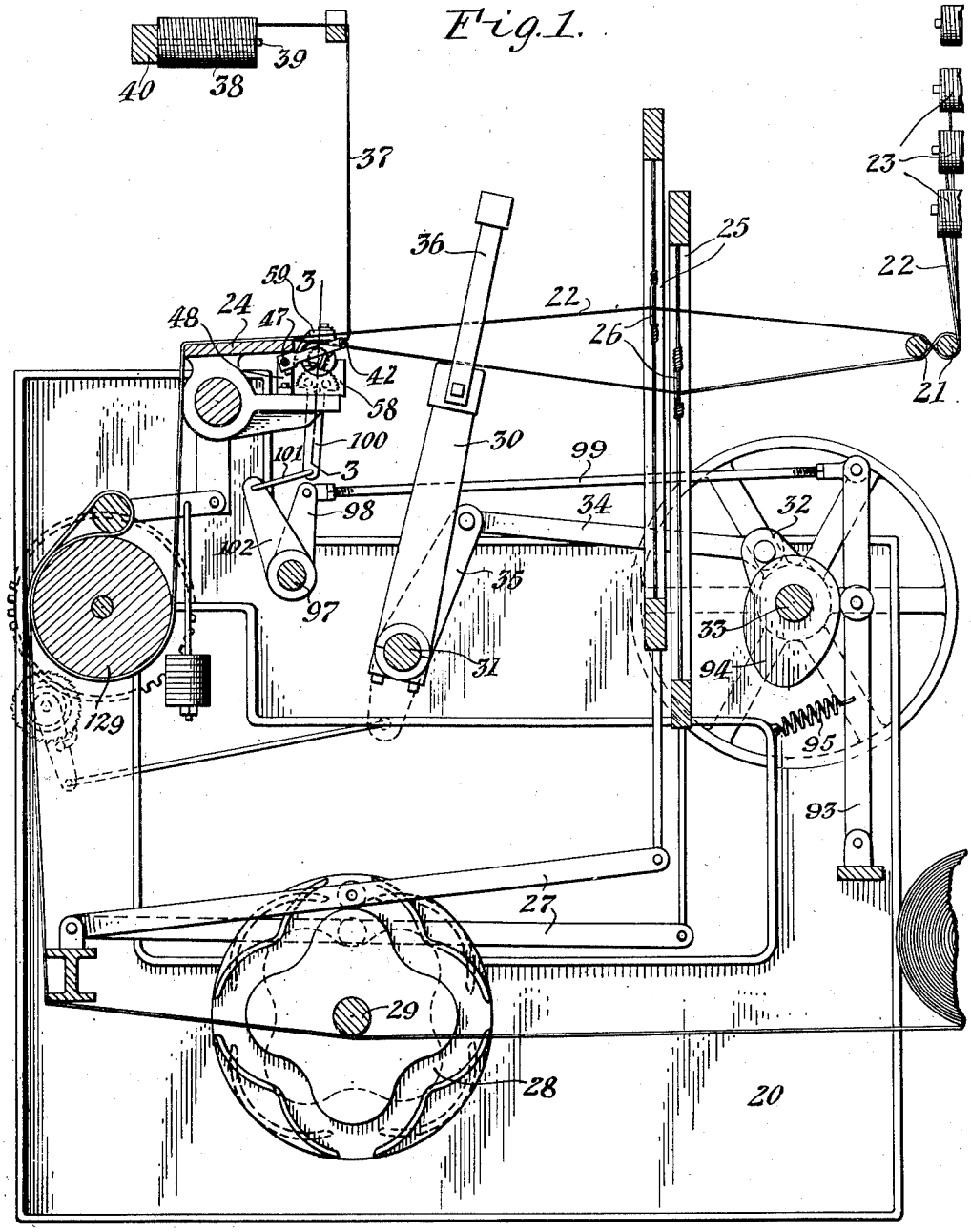
Feb. 17 1925. 1,526,990

R. KRENZ

LOOM

Filed Aug. 22, 1922 3 Sheets-Sheet 1

Fig. 1.



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Fig. 2.

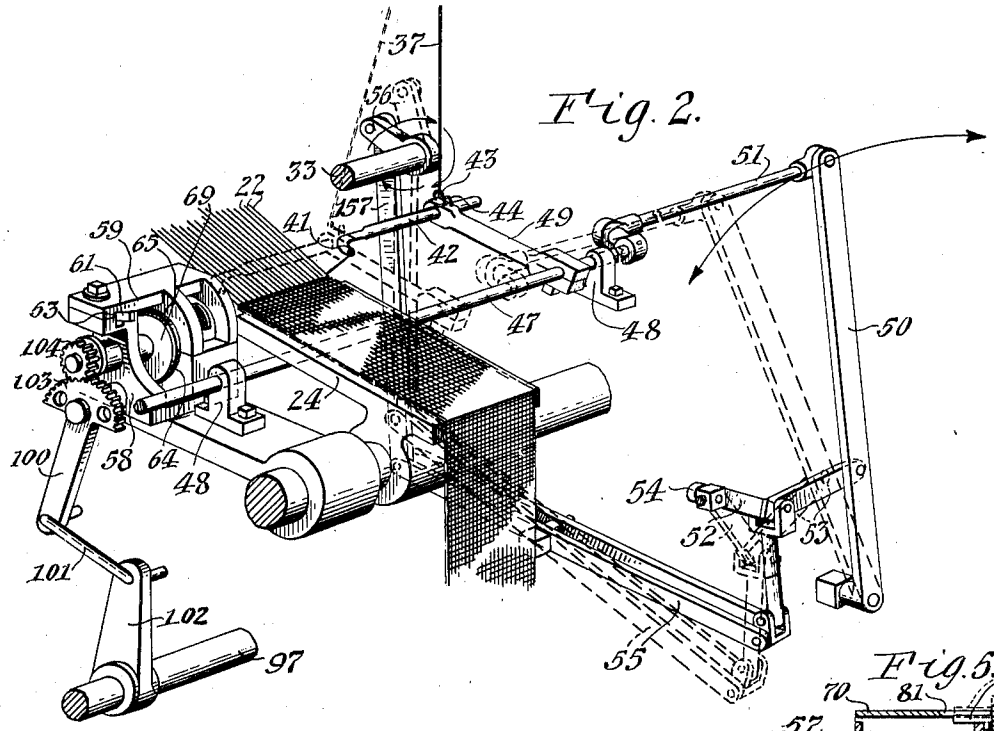


Fig. 5.

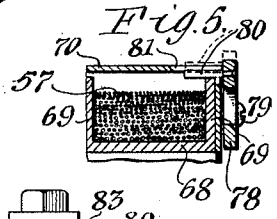


Fig. 3.

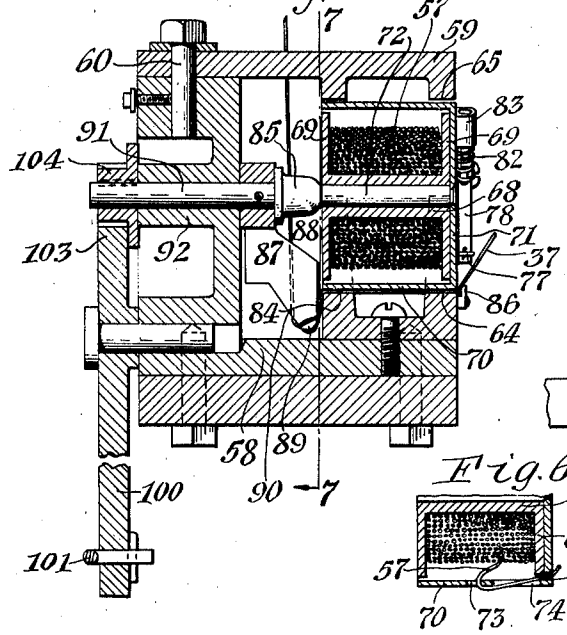


Fig. 4.

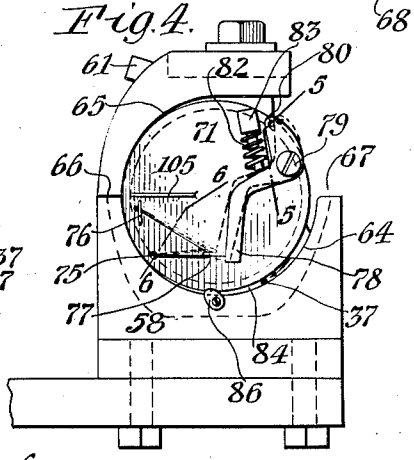


Fig. 6.

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Fig. 7.

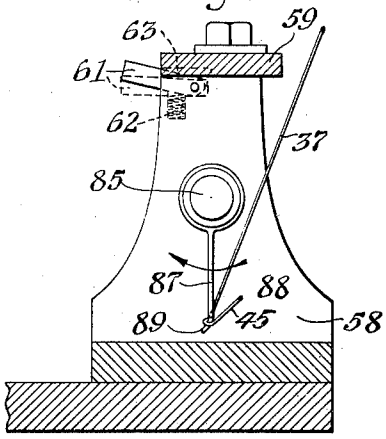


Fig. 8.

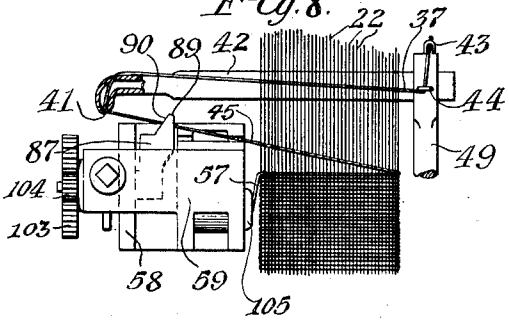


Fig. 9.

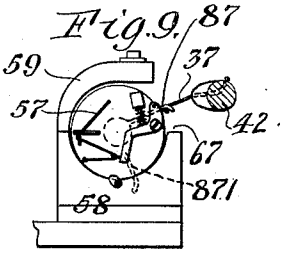


Fig. 10.

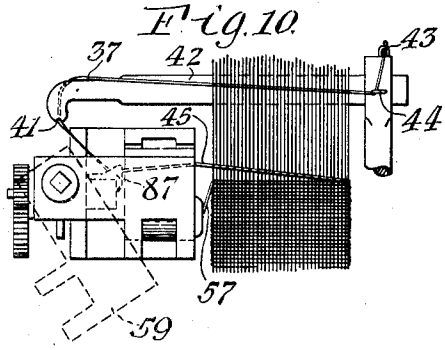


Fig. 11.

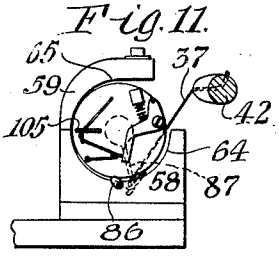


Fig. 14.

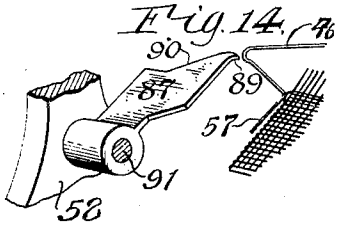


Fig. 13.

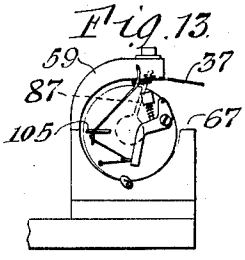


Fig. 12.

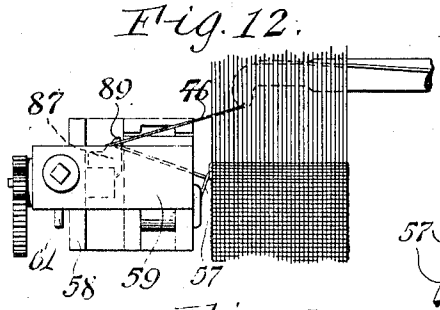


Fig. 17.

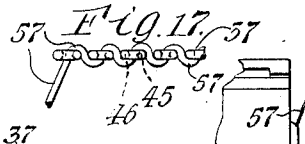


Fig. 16.

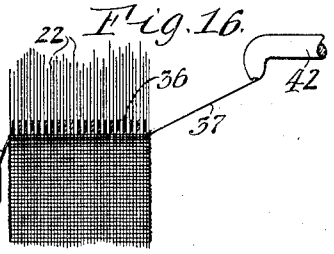


Fig. 15.

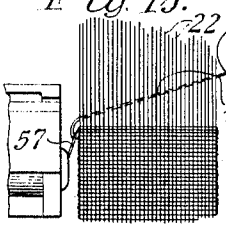
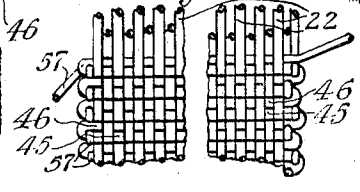


Fig. 18.



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Patented Feb. 17, 1925. 1,526,990

UNITED STATES PATENT OFFICE.

RUDOLPH KRENZ, OF BUFFALO, NEW YORK, ASSIGNOR TO BUFFALO WEAVING & BELTING CO., OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

LOOM.

Application filed August 22, 1922. Serial No. 583,505.

To all whom it may concern:

Be it known that I, RUDOLPH KRENZ, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Looms, of which the following is a specification.

This invention relates to that class of looms which are more particularly intended for weaving narrow fabric and in which the filling or weft thread is carried to and fro in the form of loops through the shed between the warp threads by a needle having an eye at its point which receives the filling thread.

In looms of this character as heretofore constructed the filling thread was usually supplied in such manner that frequent replenishing of the supply was necessary which necessitated an undue interruption in the operation of the loom and a corresponding reduction in output. In these former looms the means for locking the filling on the entwining edge of the fabric was of a character which required a comparatively slow operation in order to avoid missing and the same was also delicate, liable to get out of order and uncertain in its operation which further tended to increase the cost of operation and reduce the output of the machine.

The object of this invention is the provision of a loom of this character which permits of using a comparatively large spool of filling or weft thread in order to materially reduce the loss of time for replenishing and also to so construct the means for interlocking the filling with the holding thread on the entwining edge of the fabric that the loom may be operated faster, more reliably and with less liability of getting out of order, thereby effecting a substantial economy in production.

In the accompanying drawings: Figure 1 is a fragmentary vertical longitudinal section of a loom embodying my invention. Figure 2 is a sectional perspective view of the mechanism for carrying the filling thread through the shed and entwining the same with the holding thread. Figure 3 is a vertical longitudinal section, on an enlarged scale, of the shuttle mechanism which carries the holding thread. Figure 4 is an end view of the same. Figures 5 and 6 are fragmentary sectional views of the shuttle mechanism taken on the correspondingly numbered lines in Fig. 4. Figure 7 is a vertical cross section of the shuttle mechanism taken on line 7—7, Fig. 3. Figure 8 is a fragmentary top plan view of the loom on a reduced scale, showing the relative position of the parts when the entwining finger of the shuttle mechanism first engages the forward stretch of a filling loop preparatory to entwining the same with the holding thread and forming the backward stretch of the filling loop. Figure 9 is an inner end view of the shuttle mechanism corresponding in position to Fig. 8. Figure 10 is a view similar to Fig. 8, but showing the entwining finger turned forwardly partway so that the forward stretch of the filling loop is carried underneath the shuttle. Figure 11 is an inner end view of the shuttle mechanism corresponding to Fig. 10. Figure 12 is a view similar to Figs. 8 and 10 but showing the forward stretch of the filling loop carried by the entwining finger over the top of the shuttle. Figure 13 is an inner end view of the shuttle mechanism corresponding to Fig. 12. Figure 14 is a sectional perspective view of the entwining finger in the position in which the filling loop has just disengaged therefrom. Figure 15 is a plan view similar to Figs. 8, 10 and 12 showing the turn of the filling loop interlocked with the holding thread and the backward stretch of the filling loop carried through the shed. Figure 16 is a similar view showing the reed moved forwardly for packing the last forming filling loop against the previously finished part of the fabric. Figure 17 is a fragmentary view, on an enlarged scale, of that edge of the finished fabric containing the holding thread which is interlocked with the loops of the filling thread. Figure 18 is a plan view, on an enlarged scale, of a finished portion of the fabric made on this improved loom.

In the following description similar characters of reference indicate corresponding parts in the several figures of the drawings.

My improvements may be embodied in looms which may vary considerably in details of construction, that shown in the

drawings is an example comprising a main frame 20, a yarn beam 21 around which the warp threads 22 pass from the adjacent supply spools or bobbins 23 forwardly to a cloth table 24, vertically movable heddles or harnesses 25 each of which has a plurality of eyes 26 for receiving one set of warp threads, vertically swinging rock levers 27 connected with the heddles, respectively, and adapted to shift the same so that the sets of warp threads are successively reversed and the same are alternately in the upper and lower positions relatively to each other, a cam wheel 28 for operating said rock levers, a rotary shaft 29 journaled on the main frame and carrying the cam wheel, a cloth beam 129 which receives the finished cloth after the same passes the cloth table, a longitudinally movable batten 30 arranged below the path of the warp threads in front of the heddles and mounted at its lower end on a transverse rock shaft 31 journaled on the main frame, a crank arm 32 mounted on a driving shaft 33 and connected by a link or rod 34 with a rock arm 35 on the batten shaft 31, and a reed 36 mounted on the batten and receiving the warp threads in its interspaces and adapted to press the filling within the shed forwardly against the finished part of the fabric or cloth.

37 represents the filling, woof or weft thread for the fabric which is supplied from a spool or bobbin 38 which is rotatably supported on a pin 39 carried by an overhead bar 40 or other suitable support. This filling passes through the eye 41 at the point end of a horizontal needle 42 and is guided between the needle and the supply spool 38 in a pair of guide eyes 43, 44 arranged one behind the other adjacent to the base or shank of the needle. This needle is moved forward and backward through each shed between the sets of warp threads after each movement of the harness or heddles for the purpose of laying a loop of filling thread across the shed which loop consists of a forward stretch 45 and a backward stretch 46, the rear end of the forward stretch being held by turning around the adjacent edge of one set of warp threads, the front ends of these stretches being connected by the front turn in the filling and the rear end of the backward stretch being connected with the thread of the supply spool 38. The needle is operated so that its eye traverses the shed forwardly and backwardly after each harness or heddle operation by means which are preferably constructed as follows:

47 represents a transversely reciprocating shifting bar arranged horizontally below the cloth table and guided in brackets 48 on the main frame or any other approved way. This needle shifting bar is provided with a rearwardly projecting arm 49 which carries the butt end of the needle and also the filling guides 43, 44, and a reciprocating movement is imparted thereto by motion derived from the driving shaft 33 in any suitable manner. The preferred means for this purpose shown in the drawings comprise an upright rock lever 50 pivoted at its lower end and connected at its upper end by means of a link 51 with the needle rod 47 a pair of toggle links 52, 53 having their opposing ends pivotally connected and their opposite extremities pivoted respectively to a fixed support 54 and to the rock lever 50, a vertically swinging intermediate rock lever 55 pivoted on the main frame and having its front arm connected by a link with the toggle links, a crank arm 56 arranged on the driving shaft 33, and a link 157 connecting the crank arm 56 with the rear arm of the intermediate rock lever 55, as best shown in Fig. 2. During each rotation of the driving shaft 33 the needle rod 47 is by these means moved forwardly and backwardly and a loop of filling is placed across each shed of the warp threads.

Means are provided for entwining a holding or locking thread 57 with the turn of each loop along the adjacent edge of the fabric and thus permit the backward stretch of each loop to be placed in the shed without disturbing the forward stretch of the same. In their preferred construction the means for accomplishing this purpose are constructed as follows:

Mounted on the main frame adjacent to that edge of the woven fabric on which the turns in the filling loops are held by the holding thread 57 is a bracket having a lower fixed section 58 and an upper movable section 59 which is pivoted at its outer end to the corresponding end of the lower section by a vertical pin 60 so that the upper section can swing horizontally for bringing its inner end over the inner end of the lower section or to one side of the same. These two bracket sections are held in their normal operative position relatively to each other by a vertically swinging catch 61 pivoted on the lower bracket section and held by a spring 62 in engagement with a notch 63 in the upper bracket section, as shown in Figs. 2 and 7. The inner parts of the upper and lower bracket sections are constructed to form between them a circular seat which has its axis arranged horizontally and which is adapted to receive the shuttle carrying the supply of holding thread 57. This circular seat has a lower section 64 formed on the lower bracket section and an upper section 65 formed on the upper section, and the inner parts of the upper and lower bracket sections engage each other on their front sides, as shown at 66 while their rear sides are separated from each other, as shown at 67 to

form a lateral passageway through which the holding thread may pass for a purpose as will presently appear. The holding thread shuttle comprises a rotary bobbin, spool, or quill having a tubular hub 68 and disks 69 at opposite ends of the hub, and a shell, housing, or casing having a cylindrical wall 70 surrounding the bobbin, a head 71 at its inner end extending across the corresponding end of the holding thread bobbin, and a pivot pin 72 projecting from the center of said head into said tubular hub for pivotally supporting the latter.

The holding thread is wound on the hub of the latter between the disks thereof and passes thence outwardly through an opening 73 in the wall of the casing, thence inwardly through an opening 74 in this wall, thence through an opening 75 in the head of the casing, as shown in Fig. 6, thence through an eye 77 on a brake lever 78, as shown in Fig. 4, thence through an eye 76 on the outer side of said head adjacent to its periphery and thence along the adjacent edge of the fabric where the same is entwined with the turns of successive loops of filling thread. The engagement of the fllling thread with the surfaces of the several openings of the shuttle and the eye of the brake lever through which the holding thread passes serve to retard the movement of this thread so that the same does not escape too freely from the bobbin of the shuttle. To further regulate or check the escape of holding thread from the shuttle bobbin and place an even tension on the same, means are provided for controlling the rotation of the shuttle bobbin in its casing which means are the brake lever 78 and the eye 77. This lever is pivoted on the outer side of the head of the shuttle casing by means of a screw 79 and carries the eye 77 on its inner arm while its outer arm is provided with a brake finger 80 which projects through an opening 81 in the casing and is yieldingly held in engagement with the periphery of the inner disk of the shuttle by a spring 82 interposed between the inner arm of the brake lever and a lug 83 on the head of the shuttle casing, as shown in Figs. 3, 4 and 5. When a pull is exerted on the holding thread while the same is being entwined with the loops of the filling thread, this tension is transmitted to the inner arm of the brake lever whereby the latter is turned in the direction for disengaging the brake finger on its outer arm from the periphery of the shuttle bobbin and permitting the latter to turn freely and pay out the required amount of holding thread. The instant however that the pull on the holding thread is relaxed the spring 82 turns the lever so that its brake finger engages the periphery of the shuttle bobbin and thus checks the further escape of holding thread and maintains the same sufficiently taut to ensure proper entwining of the same with the loops of the filling thread.

The shuttle rests loosely in the seat in the supporting bracket so that the same is free to rotate therein if the pull on the holding thread should tend to produce such an effect on the shuttle. The diameter of the shuttle is, however, slightly less than that of its seat on the bracket so as to form an annular clearance passage 84 between the shuttle and its seat through which the filling thread may be carried in a circular path for the purpose of entwining the same with the holding thread. Endwise movement of the shuttle in its seat is prevented by an outer stop 85 engaging with the central part of the outer end of the shuttle, and an inner stop 86 arranged on the lower part of the lower bracket section at the inner end of the same and loosely overhanging the adjacent inner side of the shuttle casing but spaced therefrom so as to permit the passage therebetween of the filling thread.

The filling thread is carried around the shuttle for the purpose of entwining the same with the holding thread by an entwining finger 87 which rotates in a chamber 88 formed between the outer end of the shuttle and the adjacent outer part of the bracket. This entwining finger turns about a transverse horizontal axis which is preferably axially in line with the shuttle and is provided at its outer end with a hook 89 which is adapted to engage the filling thread and an outer inclined face 90 adjacent to said hook, as best shown in Fig. 14. At its inner end this entwining finger is secured to a horizontal shaft 91 which is journaled in a bearing 92 in the adjacent outer part of the lower bracket section, the inner end of said shaft having preferably mounted thereon the outer stop 85 which limits the outward movement of the shuttle. A rotary movement alternately in opposite directions is imparted to the shaft 91 by motion derived from the driving shaft 33, this being preferably accomplished by means which comprise an upright rock lever 93 pivoted on the main frame and adapted to be moved backwardly by a rotary cam 94 on the driving shaft and forwardly by a spring 95 connecting the same with the main frame, an intermediate rock shaft 97 journaled horizontally on the main frame and having a rock arm 98 connected by a link 99 with the rock lever 93, an intermediate rock lever 100 pivoted to swing about a horizontal axis on the shuttle bracket and having its lower arm connected by a link 101 with a rock arm 102 on the intermediate rock shaft 97, and a gear segment 103 arranged on the upper arm of the rock

lever 100 and meshing with a gear pinion 104 on the outer end of the entwining finger shaft 91.

While the filling carrying needle is moving forwardly with the filling through the shed the entwining finger is moved to such a position that the same is out of the path of the filling, for instance the same may be projected from the lower side of its shaft as shown by dotted lines 871 in Fig. 9. After the needle has carried the filling thread forward to its farthest extent, the forward stretch of the filling loop extends at an angle from the rear edge of the fabric, past the front edge of the same and across the path of the entwining finger. Immediately thereafter the entwining finger during its forward rotary movement engages its hook with the forward stretch of the filling loop, as shown in Figs. 8 and 9. During the continued forward rotary movement of the entwining finger in this direction the same first carries the forward stretch of the filling thread downwardly between the underside of the shuttle and lower part of its seat, as shown in Figs. 10 and 11, then upwardly between the top of the shuttle and the upper part of its seat, as shown in Figs. 12 and 13, and then continues until it reaches approximately the position where the same first engaged the forward stretch of the filling, as shown in Fig. 14. In the meantime the needle has effected part of its backward stroke, as shown in Figs. 12 and 13 whereby part of the backward stretch of the filling is produced and as the needle continues its backward stroke, the filling loop slips off from the hook of the entwining finger, as shown in Fig. 14, by reason of the inclined outer edge 90 of this finger coming in line with the direction of pull of the needle on the backward stretch of the filling loop.

As the filling loop is carried by the entwining finger around the shuttle the front part of this loop is carried a complete turn around the adjacent part of the holding thread which extends from the front edge of the fabric to the bobbin of the shuttle, thereby forming an interlock between the filling thread and the holding thread at this edge whereby the loop of filling thread is held across the shed and prevented from being displaced or pulled back bodily during the return movement of the needle, as well as after the fabric is finished. After the filling has been thus detached from the entwining finger the needle continues its backward movement until it entirely clears the shed and carries the backward stretch of the loop entirely across the shed, as shown in Fig. 15. The reed now moves forwardly and presses this last formed loop of filling against the previously finished part of the fabric, as shown in Fig. 16, after which the reed moves rearwardly preparatory to forming the next shed and repeating the operation of placing a loop of filling and entwining the holding thread with the turn on the front edge of the fabric as previously described.

When the supply of holding thread is exhausted the shuttle bobbin may be easily removed from the shuttle bracket and replaced by a filled one upon unlocking the catch 61 of the upper section of the shuttle bracket and swinging the same forwardly sufficient to permit a shuttle to be moved out of and into the shuttle seat. In order to prevent that part of the holding thread extending from the shuttle to the fabric from becoming caught on the brake lever and adjacent parts in some positions of the shuttle, a guard or deflector 105 is arranged on the outer face of the shuttle casing head next to the guide eye 76, which prevents such interference by throwing the holding thread away from the shuttle casing.

By employing a shuttle mechanism of this character it is possible to employ a comparatively large supply spool of filling thread in a convenient position, and the machine can be operated much faster than has been possible heretofore, thereby enabling this class of goods to be produced at considerably less cost.

Furthermore this shuttle mechanism is easy of access, the same has no delicate parts and is not liable to get out of order by continued usage, thereby avoiding undue interruption in the operation of the machine.

I claim as my invention:

1. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, means for actuating said needle comprising a transversely reciprocating rod carrying said needle, an upright rock lever connected with said rod, a pair of toggle links connected with said upright lever, an intermediate lever having one arm connected with said toggle links, and a rotary shaft having a crank connected with the other arm of said intermediate lever, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric.

2. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a shuttle having a bobbin which carries said holding thread, and a rotary finger adapted to engage said filling thread and pass the same around said shuttle and the adjacent part of said holding thread.

3. A weaving loom comprising a harness for shedding the warp threads, a needle

for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric, comprising a shuttle having a bobbin which carries said holding thread, and a rotary finger adapted to engage said filling thread and pass the same around said shuttle and the adjacent part of said holding thread and provided at its outer end with a hook and on its outer edge with an incline leading to said hook.

4. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a circular seat and a passage extending laterally from said seat, a shuttle resting in said seat and containing a bobbin which carries said holding thread, and a rotary finger which engages said filling thread and carries the same through said passage and around sead seat and shuttle and around said holding thread.

5. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a circular seat and a passage extending laterally from said seat, a shuttle resting in said seat and containing a bobbin which carries said holding thread, and a rotary finger which engages said filling thread and carries the same through said passage and around said seat and shuttle and around said holding thread said bracket having a fixed lower section and a movable upper section.

6. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a circular seat and a passage extending laterally from said seat, a shuttle resting in said seat and containing a bobbin which carries said holding thread, and a rotary finger which engages said filling thread and carries the same through said passage and around said seat and shuttle and around said holding thread, said bracket having a fixed lower section and a movable upper section pivoted to swing horizontally on the lower section.

7. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a circular seat and a passage extending laterally from said seat, a shuttle resting in said seat and containing a bobbin which carries said holding thread, and a rotary finger which engages said filling thread and carries the same through said passage and around said seat and shuttle and around said holding thread, said bracket having a fixed lower section and a movable upper section pivoted to swing horizontally on the lower section, and a catch for locking said movable and stationary bracket sections in a normal position relatively to each other.

8. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a circular seat and a passage extending laterally from said seat, a shuttle resting in said seat and containing a bobbin which carries said holding thread, a rotary finger which engages said filling thread and carries the same through said passage and around said seat and shuttle and around said holding thread, and means for actuating said finger comprising a shaft journaled on said bracket and carrying said finger, a pinion connected with said shaft, and an oscillating gear segment meshing with said pinion.

9. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a circular seat and a passage extending laterally from said seat, a shuttle resting in said seat and containing a bobbin which carries said holding thread, a rotary finger which engages said filling thread and carries the same through said passage and around said seat and shuttle and around said holding thread, and means for actuating said finger comprising a shaft journaled on said bracket and carrying said finger, a pinion connected with said shaft, an oscillating gear segment meshing with said pinion, a rock lever carrying said segment, an intermediate rock shaft, a rock arm mounted on said shaft and connected with said rock lever, a cam lever, a rock arm arranged on said shaft and connected with said cam lever, and a rotary cam for actuating said cam lever.

10. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining

a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a seat, a shuttle having an enclosing casing consisting of a circular wall arranged within said seat and a head arranged at the inner end of said wall, and a bobbin arranged within said casing and carrying the holding thread, and a rotary finger adapted to engage the filling thread and carry the same around said shuttle and the adjacent part of the holding thread.

11. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a seat, a shuttle having an enclosing casing consisting of a circular wall arranged within said seat and a head arranged at the inner end of said wall, and a bobbin arranged within said casing and carrying the holding thread and having a hub and disks at the end of the hub, and a rotary finger adapted to engage the filling thread and carrying the same around said shuttle and the adjacent part of the holding thread.

12. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a seat, a shuttle having an enclosing casing consisting of a circular wall arranged within said seat and a head arranged at the inner end of said wall, and a bobbin arranged within said casing and carrying the holding thread and having a hollow hub and disks at the ends of said hub, and said head having a central pin engaging with said hollow hub, and a rotary finger adapted to engage the filling thread and carry the same around said shuttle and the adjacent part of the holding thread.

13. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a seat, a shuttle having an enclosing casing consisting of a circular wall arranged within said seat and a head arranged at the inner end of said wall, and a bobbin arranged within said casing and carrying the holding thread, a rotary finger adapted to engage the filling thread and carry the same around said shuttle and the adjacent part of the holding thread, and inner and outer stops for preventing longitudinal displacement of said shuttle on said seat.

14. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a supporting bracket having a seat, a shuttle having an enclosing casing consisting of a circular wall arranged within said seat and a head arranged at the inner end of said wall, and a bobbin arranged within said casing and carrying the holding thread, a rotary finger adapted to engage the filling thread and carry the same around said shuttle and the adjacent part of the holding thread, a rotary shaft journaled on said bracket and carrying said finger, an outer stop arranged on the inner end of said shaft and adapted to engage the outer end of said shuttle, and an inner stop arranged on the bracket and adapted to engage the inner end of said shuttle.

15. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a shuttle having an enclosing casing, a rotary bobbin arranged within the casing and carrying the holding thread and a brake device for controlling rotation of the bobbin and responsive to the pull on said holding thread and comprising a lever having an eye which receives said holding thread and a brake finger, and a spring for moving said lever in the direction for engaging said bobbin.

16. A weaving loom comprising a harness for shedding the warp threads, a needle for moving a filling thread in the form of a loop across each shed, and means for entwining a holding thread with the turn of each loop along the adjacent edge of the fabric comprising a shuttle having an enclosing casing, a rotary bobbin arranged within the casing and carrying the holding thread and a brake device for controlling rotation of the bobbin and responsive to the pull on said holding thread and comprising a lever pivoted on said casing and having an inner arm provided with an eye for receiving said holding thread and an outer arm, a brake finger arranged on said outer arm and projecting through said casing along the periphery of said bobbin, and a spring mounted on said casing and operating on said lever to turn the same in the direction for engaging the periphery of said bobbin when the pull on said holding thread is relaxed.

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