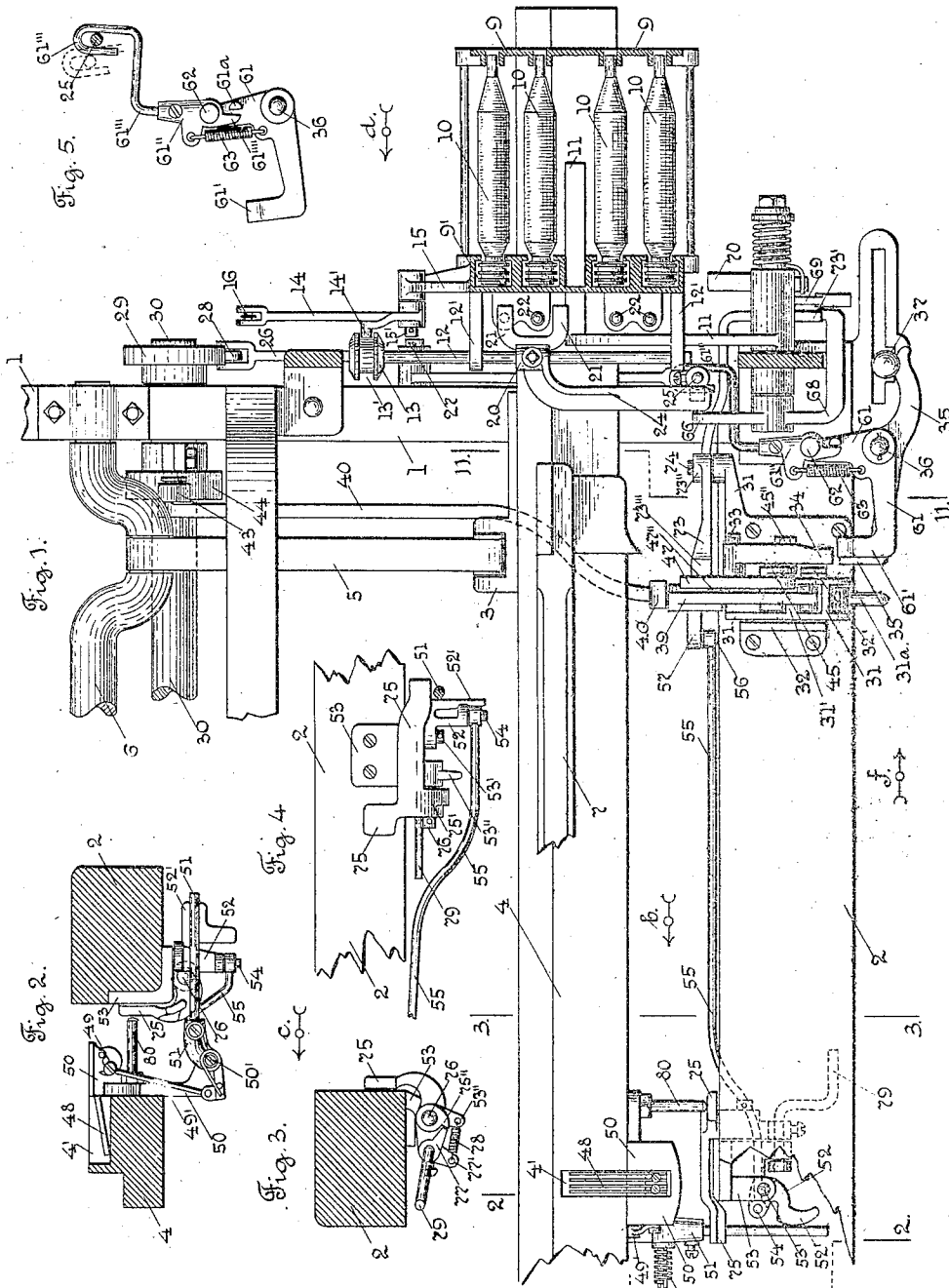


P. MACPHERSON.  
WEFT REPLENISHING LOOM.  
APPLICATION FILED JULY 27, 1907.

935,671.

Patented Oct. 5, 1909.

4 SHEETS—SHEET 1.



Witnesses  
M. Bredt.  
M. O'Leary.

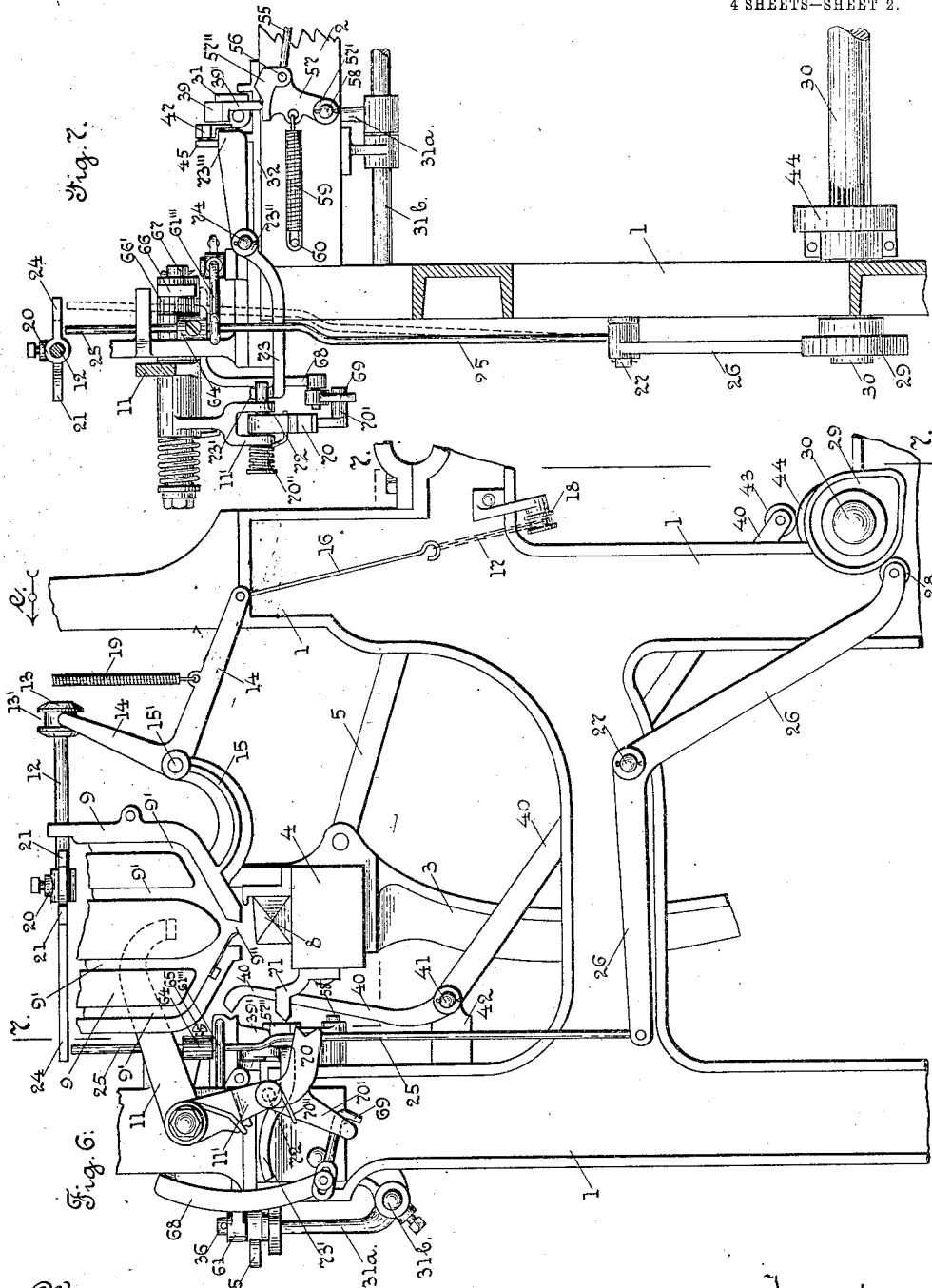
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4 SHEETS—SHEET 2.



Witnesses  
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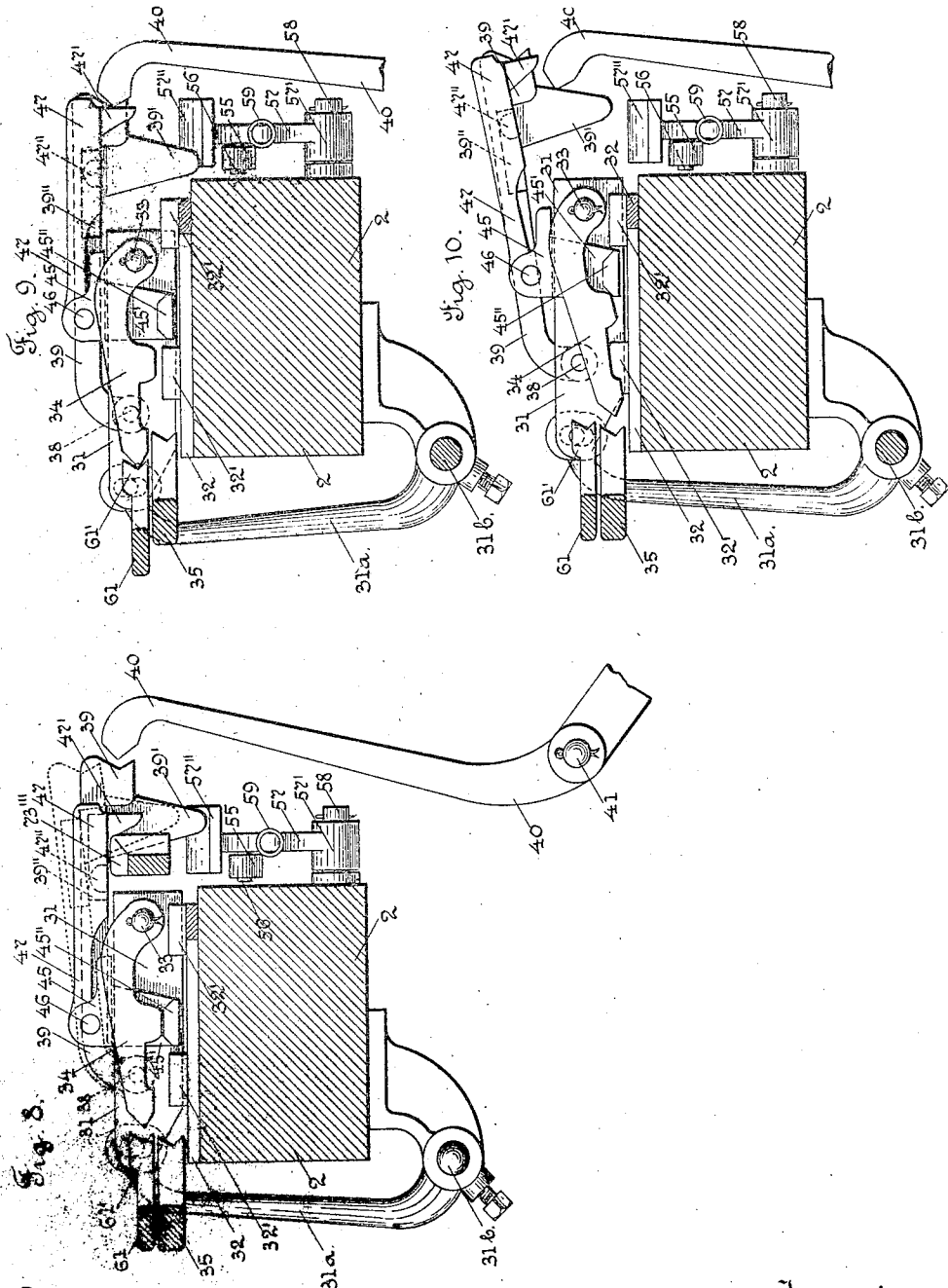
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4 SHEETS—SHEET 3.

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Witnesses  
M. Bredt.  
H. H. H. H.

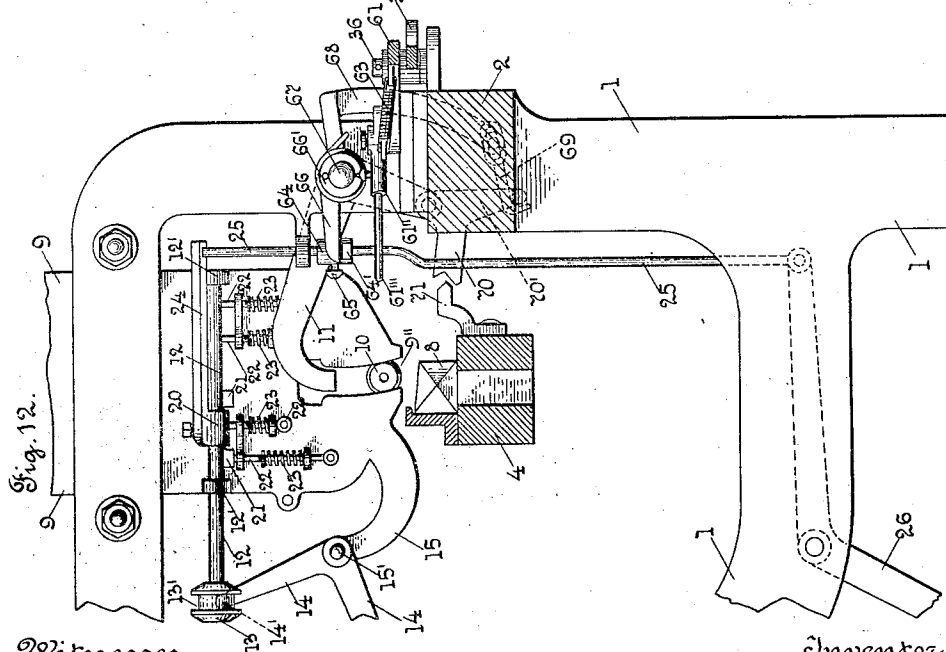
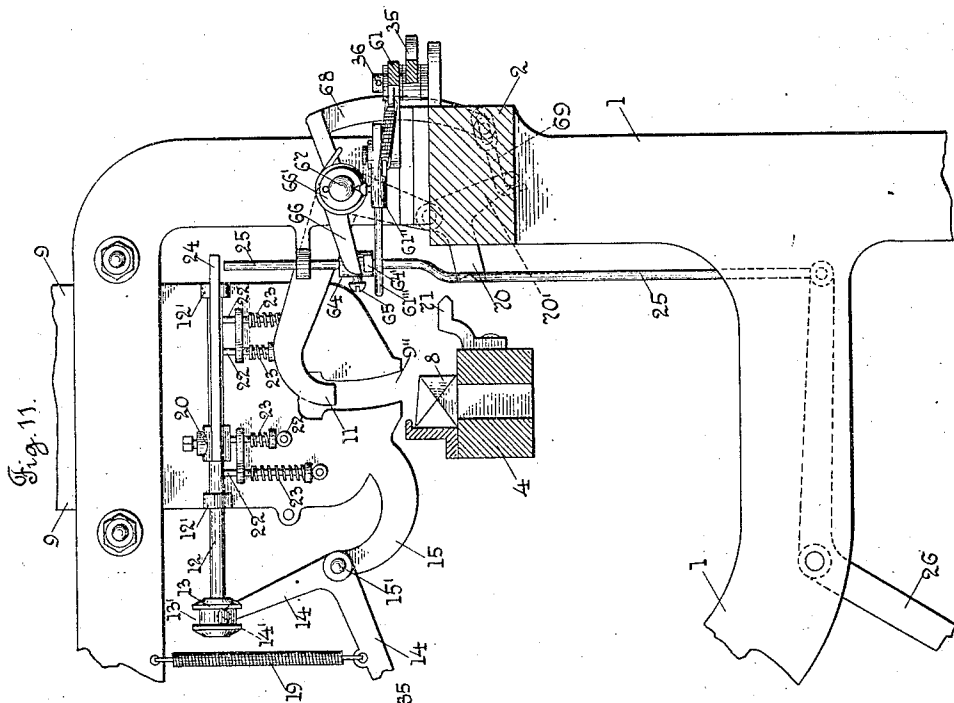
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4 SHEETS—SHEET 4.



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# UNITED STATES PATENT OFFICE.

PETER MACPHERSON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO CROMPTON & KNOWLES LOOM WORKS, A CORPORATION OF MASSACHUSETTS.

## WEFT-REPLENISHING LOOM.

935,671.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed July 27, 1907. Serial No. 385,777.

*To all whom it may concern:*

Be it known that I, PETER MACPHERSON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Weft-Replenishing Looms, of which the following is a specification.

My invention relates to weft replenishing looms, and to that class of looms in which on the exhaustion or breaking of the filling, a fresh filling is supplied to the running shuttle without stopping the loom, said filling being automatically threaded into the running shuttle, and my invention particularly relates to improved mechanism for causing the operation of the transferrer mechanism to insert fresh filling into the running shuttle on the breaking or exhaustion of the filling in the running shuttle, and to mechanism for stopping the loom whenever the freshly inserted filling fails to become properly threaded in the running shuttle.

I have found in practice—in looms of the class referred to, when the filling fork of a side stop motion, located at the magazine end of the loom, is used to put into operation mechanism for stopping the loom, in case the freshly inserted filling is not properly threaded into the running shuttle, that by reason of the location of the stop motion, the filling fork does not work satisfactorily, and is also quite inaccessible to the operator, and in the way of the shuttle entering the box at the magazine end of the loom, and therefore in my present improvements, I do away with the side stop motion, and substitute therefor a center stop motion, and I combine with the filling fork of said center stop motion, mechanism to put into operation, through the operation, or the failure of operation of the filling fork of the center stop motion, mechanism which will operate to transfer filling from the magazine into the running shuttle, and in case the freshly inserted filling is not properly threaded into the running shuttle, will stop the loom.

I have shown in the drawings detached portions of a loom of the class referred to, with my improvements combined therewith, sufficient to enable those skilled in the art to understand the construction and operation thereof.

In the drawings are shown in this instance

detached portions of a magazine for bobbins or filling carriers, and mechanism connected therewith, similar to what is shown and described in a pending application for Letters Patent, Serial No. 298,939, with my improvements combined therewith.

Referring to the drawings:—Figure 1 is a plan view, and partial section of the magazine end of a weft replenishing loom of the class referred to, with my improvements combined therewith. Fig. 2 is a transverse section through the lay beam, and breast beam, on line 2, 2, Fig. 1, showing the mechanism shown at the left in said figure, and looking in the direction of arrow *a*, same figure. Fig. 3 is a transverse section through the breast beam, on line 3, 3, Fig. 1, looking in the direction of arrow *b*, same figure. Fig. 4 is a side view of the parts shown in Fig. 3, looking in the direction of arrow *c*, same figure. Fig. 5 shows the movable and give-way lever, shown at the lower right hand corner in Fig. 1, detached. Fig. 6 is an end view of some of the parts shown in Fig. 1, looking in the direction of arrow *d*, same figure. Fig. 7 is a section, on line 7, 7, Fig. 6, looking in the direction of arrow *e*, same figure. Fig. 8 shows, on an enlarged scale, some of the parts shown at the left in Fig. 6, detached. Fig. 9 shows some of the parts shown in Fig. 8, in a different position. Fig. 10 corresponds to Fig. 9, but shows some of the parts in a different position. Fig. 11 is a transverse section, on line 11, 11, Fig. 1, looking in the direction of arrow *f*, same figure, and Fig. 12 corresponds to Fig. 11, but shows a different position of some of the parts.

In the accompanying drawings, 1 is a portion of the right hand side or end frame, 2 is the breast beam, 3 is the lay sword, 4 the lay beam, connected through connector 5 with the crank shaft 6, 7 is the hand rail, 8 a shuttle, 9 the stationary magazine, having in this instance four guide-ways or compartments 9', for bobbins or filling carriers 10, which drop down by gravity to the lower discharging end 9'' of the magazine, see Fig. 12, to be engaged by the transferrer arm 11 of the transferrer mechanism.

Upon the inner or rear side of the magazine is located a longitudinally moving and rocking rod 12, mounted in suitable bearings 12', see Figs. 11 and 12, which has fast on one end a boss or collar 13, having an

annular groove or recess 13' therein, to receive a stud 14' on one arm of an angle lever 14, pivoted at 15' on an arm or bracket 15. The other arm of the angle lever 14 is connected, in this instance through a wire 16 and a flexible connection 17 passing over a guide-pulley 18, see Fig. 6, with the shuttle boxes, not shown, at the other end of the loom.

A spring 19, attached at one end to one arm of the angle lever 14, and at its other end to the stand for the magazine, see Fig. 11, acts to move the lever 14, and the rod 12 in one direction, toward the front of the loom. The rod 12 has secured thereon a collar 20, which has extending out therefrom on the outer side thereof a yoked shaped plate 21, see Fig. 1, forming two blades or fingers for engaging the pins 22; each pin 22 has a spring 23 thereon, and is connected with the rocking support; not shown, for the bobbins 10. The collar or sleeve 20 also has thereon an arm 24, see Fig. 1, which extends toward the front of the loom, in a direction parallel to the rod 12. The end of the arm 24 is so located that it will extend over the upper end of a vertically moving rod 25, when said rod is moved into one position. The lower end of the vertically moving rod 25, see Fig. 6, is connected with one arm of an angle lever 26, pivoted on a stud 27; the other arm of the angle lever 26 in this instance carries a roll 28, which engages with and is operated by a cam 29, fast on the bottom shaft 30.

All of the above mentioned parts may be of the usual and well known construction, and the magazine and the parts connected therewith, above described, are particularly shown and described in the application for Letters Patent of the United States, Serial No. 298,939, above referred to.

I will now describe the other parts shown in the drawings, and my improvements combined therewith.

The main slide or carriage 31 of the center filling stop motion is mounted on a plate 32 on the top of the breast beam, at the right hand end thereof, see Fig. 1, and is connected through arm 31<sup>a</sup>, with the rock shaft 31<sup>b</sup> of the shipping mechanism, in the usual way, and carries at its inner end a stud 33, see Fig. 8, on which is pivotally mounted the inner end of the stop motion dagger 34, which is adapted to engage at its other end the knock-off lever 35, pivotally mounted on a stud 36, see Fig. 1, and adapted to engage the shipper handle 37 of the shipper lever, to move said shipper handle and stop the loom, in the usual way. There is also pivotally mounted on a pin 38, on the main slide or carriage 31, the outer end of an arm or bunter 39. The inner end of said arm or bunter 39 may extend in the path of the upper end of the cam lever 40,

pivotally mounted on a stud 41 on a stand 42, see Fig. 6, and carrying a roll 43 at its lower end, which travels on a cam 44, fast on the bottom or cam shaft 30.

A second carriage or slide 45 is supported on the main slide or carriage 31, to move therewith, and also to move independently. Said slide or carriage 45 has thereon a downward projection 45', on which there is an inclined or cam shaped side extension 45'', which is adapted to engage and raise the dagger 34 on the main slide or carriage 31, as shown in Fig. 8. The auxiliary slide or carriage 45 has pivotally mounted thereon, on a pin 46, see Fig. 8, the outer end of a bunter 47, which extends parallel to the bunter 39, see Fig. 1, with its inner end having a downward projection 47' thereon, adapted to extend in the path of and be engaged by the upper end of the cam lever 40. The vertically extending projection 32', on the plate 32, limits the reciprocating movement of the slide 45, through the engagement of the side extension 45'' on said slide with said projection.

The center filling fork 48, having in this instance four blades, see Fig. 1, is adapted to drop down within the recess 4' in the lay beam 4, and is attached to a rocking stud 49, mounted on a stand 50, secured to the lay beam, in the usual way. On the lower end of the stand 50 is pivotally mounted on a stud 50' the inner end of a dagger 51, which is connected by a link 49' with the stud 49, see Fig. 2.

When the dagger 51 is raised, in case the filling fails to lift the filling fork 48, said dagger engages the end 52' of a crank lever 52, pivoted on a stud 53' on a bracket 53, on the underside of the breast beam, see Fig. 4, and carrying a stud 54, with which is pivotally connected one end of a rod 55. The other end of the rod 55 is connected with a stud 56 on a rocking lever 57, having a hub 57' mounted on a stud 58, fast on the inner side of the breast beam, see Fig. 7. A helically coiled contraction spring 59 is attached at one end to the lever 57, and at its other end to a pin 60 on the inner side of the breast beam, and acts to move the lever 57 to the left, see Fig. 7. The lever 57 has an inclined or cam surface 57'' upon its upper edge, which is adapted to move under and engage a downward projection 39' on the bunter 39, see Fig. 7, to raise said bunter out of the path of the cam lever 40, as shown by broken lines in Fig. 8.

Pivotally mounted on the stud 36 on the breast beam 2, is a lever 61, see Fig. 1, which has an angle shaped end 61' thereon, which is adapted to extend in the path of and be engaged by the dagger 34 on the main slide or carriage 31. The lever 61 is in this instance made as a give-way or yielding lever, and has a stud 62 thereon, on which is piv-

totally mounted a boss 61'', carrying a wire 61''' of angular shape, and having a loop at its inner end, adapted to inclose the vertically moving rod 25, see Fig. 5.

5 A helically coiled contraction spring 63 is attached at one end to the lever 61, and at its other end to a projection on the boss 61'', and acts to hold said boss in alinement with one arm of the lever 61, as shown in Fig. 1, with an extension 61'''' on the boss 61'' in engagement with a lug or ear 61<sup>a</sup> on said lever 61, and forming a yielding or give-way part on said lever, to yield or give-way, without moving the vertically moving rod 25 from the position shown in full lines, to the position shown by broken lines in Fig. 5, to move the upper end of said rod 25 under the arm 24 on the rocking rod 12, in case the upper end of said rod 25 has been raised above said arm, and engages said arm 24.

10 In the normal position of the give-way lever 61, shown in Fig. 1, the vertically moving rod 25 is held at its upper end out of the path of the arm 24 on the rocking rod 12, so that in the upward movement of said rod 25, the arm 24 will not be moved; but in case of the breaking or exhaustion of filling in the running shuttle, the dagger 34, on the main slide or carriage 31, will engage with the lever 61, and operate said lever, to move the vertically moving rod 25 under the arm 24, to rock said arm and also the rod 12, to cause the release of the bobbin desired, and allow it to drop down to the lower discharging end 9'' of the magazine 9, as shown in Fig. 12, in the usual and well known way.

On the vertically moving rod 25 is a collar 64, secured thereon in the desired position by a set screw 65 see Fig. 12. The collar 64 has a projection 64' thereon which, when the rod 25 is moved inwardly to extend under the arm 24 on the rod 12, will extend under an arm 66, the hub 66' of which is loosely mounted on a stud 67. Extending outwardly from the hub 66' is a bent arm 68, the lower end of which is connected by a hook link 69, with an arm 70' on the dagger 70, which is pivotally mounted in the usual way on the lower arm 11' of the transfer arm 11, and is adapted to be raised by a spring 70'' into a position to be engaged by the bunter 71 carried on the lay beam 4. The normal position of the dagger 70 is shown in Figs. 6, and 11; in this position the dagger is out of the path of and will not be engaged by the bunter 71 on the lay, but when the vertically moving rod 25 is moved inwardly to extend under the arm 24 on the rocking rod 12, as shown in Fig. 12, the extension 64' on the collar 64 will extend under and be in the path of and be engaged by the arm 66, so that the raising of the arm 25, to operate the arm 24 and rock the shaft 12 of the bobbin selecting mechanism, to release a bobbin, and allow it to drop down to the discharging end

9'' of the magazine 9, as shown in Fig. 12, will also move up the arm 66, and move down the arm 68, to release the dagger 70, and allow the spring 70'' connected therewith to move up said dagger into a position to be engaged by the bunter 71 as the lay beats up, to cause the operation of the transfer arm 11, to transfer a bobbin into the shuttle.

The lower arm or extension 11' of the transfer arm 11 carries a pin 72, adapted to extend over and ride on the rearwardly extending end 73' of a lever 73, see Figs. 6 and 7, which has a hub 73'' mounted on a stud 74, in this instance secured on the plate 32 on the upper side of the breast beam 2, see Fig. 1. The lever 73 extends parallel to the inner side of the breast beam, and above the breast beam, with its inner end extending underneath the bunter 47 on the auxiliary carriage 45.

The movement of the transfer arm 11 to insert a new bobbin, will through the engagement of the stud or pin 72 on the arm 11' with the end 73' of the lever 73, move down the outer end of said lever 73, and raise up the other arm of said lever 73 to raise the bunter 47. The bunter 47 has a side extension 47'' thereon, see Fig. 10, which is adapted to extend into an undercut recess 39'' in the bunter 39, and cause the raising of said bunter 39 with the raising of the bunter 47. The raising of both bunters 39 and 47, as shown in Fig. 10, prevents the engagement of the upper end of the cam lever 40, with either of said bunters, to move back the main slide or carriage 31, and through the arm 31<sup>a</sup> rock the shaft 31<sup>b</sup> of the shipping mechanism. The main slide or carriage 31 with the parts thereon, will be moved to its forward position in the usual way, by a spring, not shown.

In case the bobbin transferred from the magazine has the filling thereon properly threaded, then when the shuttle returns to the magazine end of the loom again, the filling will hold up the filling fork 48 of the center filling stop motion, and the bunter 39 will be raised by the movement of the lever 57, Fig. 7, as above described, out of the path of the upper end of the cam lever 40, and the loom will continue to operate in the usual way.

If the new bobbin is not properly threaded when the shuttle returns to the magazine end of the loom, then there is no filling to hold up the filling thread fork 48, and the bunter 39 will be lowered into a position to be engaged by the upper end of the cam lever 40, as shown by full lines in Fig. 8, and the engagement of the cam lever with said bunter, will move the main slide or carriage 31 outwardly, and the dagger 34 on said carriage being in its lowered position, as shown in Fig. 10, will engage the knock-off lever 35, 120 125 130

and move said lever to operate the shipper handle 37 of the shipper lever, to stop the loom in the usual way. The shuttle can now be properly threaded by the operator, and the loom restarted.

In order to prevent the dagger 51 of the center filling stop motion engaging the end 52' of the lever 52, and in order to leave the filling replenishing mechanism at rest, in case of stopping the loom by hand for the purpose of finding mispicks, etc., there is in this instance on the stand 53 of the center filling stop motion, a lever 75, see Fig. 4, which has its hub 75' mounted on a stud 76 on the stand 53, see Fig. 3. The hub 75' of the lever 75 has an extension 75'' thereon, which is adapted to be engaged by the end of a pawl or latch 77, see Fig. 3. The pawl or latch 77 has an extension 77' thereon, which is connected by a helically coiled contraction spring 78 with an extension 53'' on the stand 53, see Fig. 3, to hold said lever 75 in its raised position. The pawl or latch 77 has connected thereto a rod or other device 79, to be operated by the weaver, to move said pawl out of engagement with the extension 75'' on the lever 75, and allow said lever 75 to move down by gravity. The downward movement of said lever 75 will cause it to engage the dagger 51, and move the free end of said dagger downwardly, and prevent it from engaging the end 52' of the crank lever 52, to operate the weft replenishing mechanism as above described.

When the lay moves to its front position again, the forwardly extending end of a pin 80, carried on the front of the lay beam, will engage the lever 75, and move said lever into its upward position, where it will be held and locked by the pawl 77.

From the above description in connection with the drawings the operation of my improvements will be readily understood by those skilled in the art, and briefly is as follows:—In the normal operation of the loom, the filling fork 48 will be held in its raised position by the filling or weft thread, as the shuttle is picked from one end of the lay to the other. The raised position of the filling fork 48 will, through intermediate connections with the dagger 51, move said dagger down, and out of the path of and out of engagement with the crank lever 52, so that the helically coiled contraction spring 59 is free to draw the lever 57, see Fig. 7, to the left, and bring the cam surface 57'' thereon under the projection 39'' on the bunter 39 carried on the main slide 31, to raise said bunter out of the path of the cam lever 40, as shown by broken lines in Fig. 8, and the loom will continue to operate in the normal way.

In case of breakage or exhaustion of filling in the running shuttle, the filling fork 48 will drop into the recess 4' in the lay beam

4, in the usual way, and the dagger 51 will be raised, so that on the forward beat of the lay, it will be in position to engage the crank lever 52, and through connections to the rocking lever 57 move said lever to the right, against the action of the spring 59, and allow the bunter 39 to drop down in a position to be engaged by the cam lever 40, as shown in Fig. 8. The dagger 34 on the main slide 31, will be in position to engage the lever 61, as shown in Fig. 8. The engagement of the cam lever 40 with the bunter 39 will move back the main slide 31 and with it the dagger 34 pivoted thereon. The backward movement of the slide 31 will cause the bunter 34 to engage the lever 61, as shown in Fig. 9, and move said lever to bring the vertically moving rod 25 under the arm 24 to rock said arm and also the rod 12 to cause the release of the bobbin desired in the magazine 9; said bobbin will drop down to the lower discharging end 9'' of the magazine in the usual way. The movement of the vertically moving rod 25 on the arm 24 will bring the projection 64' on the collar 64 on the rod 25 under the arm 66 connected with the dagger 70 and the raising of the vertically moving rod 25 at the proper time, through the rotation of the cam 29 and the movement of the cam lever 26 will raise the arm 66, see Fig. 12, and allow the dagger 70 to be moved into the path of the bunter 71, see Fig. 12, so that the engagement of said bunter with said dagger on the forward movement of the lay will operate the transferrer arm 11, to transfer a bobbin into a shuttle in the usual way.

The movement of the transferrer arm 11 to insert a bobbin into a shuttle, will, through the engagement of the pin 72 on the arm 11' of the transferrer arm 11, with the rearwardly extending end 73' of the lever 73, see Figs. 6 and 7, raise the inner weighted end 73'' of said lever 73, and through the engagement of said end with the inner end of the bunter 47, see Fig. 7, raise said bunter, and through the engagement of the projection 47'' thereon with the undercut portion 39'' of the bunter 39, raise said bunter 39, as shown in Fig. 10, and prevent the engagement of the cam lever 40 with either of said bunters 39 and 47 on the next movement of the cam lever 40.

The main slide 31 will be moved to its forward position by a spring, not shown, in the usual way, and the second slide 45 will be moved forward with the slide 31 by reason of the engagement of the cross bar 31' on the slide 31 with the slide 45, see Fig. 1. The forward movement of the slide 45 will cause the cam-shaped projection 45'' thereon to pass from under the dagger 34, as shown in Fig. 10, so that said dagger will drop from the position shown in Fig. 8 to the position shown in Fig. 10, and into a position to engage with the knock-off lever 35.

The return of the transferrer arm 11 to its normal position, after the transfer of filling, will release the lever 73 and allow the weighted end 73" thereof to drop down, and the forward end of the bunter 47 to drop down in its inward position, see Fig. 10, and also the forward end of the bunter 39 to drop down in its inward position, shown in Fig. 10, but the dagger 34 will remain in its lowered position to engage with the knock-off lever 35, as shown in Fig. 10.

In case the bobbin transferred from the magazine has the filling thereon properly threaded, the filling will hold up the filling fork 48 of the center stop motion, and the dagger 51 will be in its lowered position and out of the path of the crank lever 52, so that the spring 59 will act to move the rocking lever 57 and hold the extension 57" under the front end 39' of the bunter to hold said lever in its raised position, shown by dotted lines in Fig. 8, and out of the path of the cam lever 40, but the bunter 47 will be in its lowered position and in the path of the cam lever 40 so that the engagement of said cam lever 40 with the bunter 47 on the slide 45 will move back said slide to the position shown in Fig. 8, and cause the projection 45" thereon to engage with the dagger 31 and raise said dagger from the position shown in Fig. 10 to the position shown in Fig. 8, preparatory to the engagement of said dagger with the lever 61 at the proper time, to transfer a new bobbin from the magazine, and the loom will continue to operate normally.

In case the new bobbin is not properly threaded into the running shuttle, the filling fork 48 will not be held up by the filling, and the dagger 51 will be raised to engage the crank lever 52 and move the rocking lever 57 against the action of the spring 59, to allow the bunter 39 to drop down into its lowered position, and in the path of the cam lever 40, as shown in Fig. 8, so that the engagement of said cam lever 40 with the bunter 39 will move back the bunter 39 and with it the slide 31 and cause the dagger 34 on said slide which is in its lowered position shown in Fig. 10, to engage the knock-off lever 35 to operate the shipper handle 37, to stop the loom in the usual way. The slide 45 will move back with the slide 31 by reason of the engagement of the cam lever 40 with the bunter 47. The forward movement of the slide 31, by the action of the spring, not shown, in the usual way, will cause the dagger 34 to be raised or reset by the projection 45" on the slide 45, as said slide moves forward with the slide 31, so that the dagger 34 will be raised into its normal position shown in Fig. 8, ready to engage the lever 61 forming a part of the transferrer mechanism. After the loom has been stopped as above described, the shuttle may be

threaded by the operator and the loom restarted.

It will be understood that the details of construction of my improvements may be varied if desired.

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

1. In a weft replenishing loom, having a magazine and a transferring mechanism at one end, and a center stop motion, the combination with the filling fork of the center stop motion, of mechanism for stopping the loom in case a freshly inserted filling is not properly threaded into the running shuttle, said mechanism connected with and put into operation by the operation of said filling fork.

2. In a weft replenishing loom, a filling fork, a dagger connected therewith, connections intermediate said dagger and a bunter, and said bunter, carried on the main slide of the filling stop motion, and moved into and out of operative position relatively to a cam lever, and said cam lever, a dagger carried on said main slide, means for moving said dagger into the path of a lever, and said lever, moved by said dagger to cause the operation of the mechanism for selecting a bobbin from the magazine, and also the operation of the transferrer mechanism to transfer a bobbin into the running shuttle, and means for moving said dagger into the path of the knock-off lever, to operate said lever and stop the loom when the filling from the new bobbin is not properly threaded in the running shuttle.

3. In a weft replenishing loom, a filling fork, a dagger connected therewith, and moved into inoperative position on the raising of the filling fork, and into operative position on the lowering of the filling fork, connections intermediate said dagger and a bunter, and said bunter carried on the main slide of the filling stop motion and moved into and out of operative position relatively to a cam lever, and said cam lever, a dagger carried on said main slide, means for moving said dagger into the path of a lever, and said lever moved by said dagger to cause the operation of the mechanism for selecting a bobbin from the magazine, and also the operation of the transferrer mechanism to transfer a bobbin into the running shuttle, and connections intermediate the transferrer arm of the transferrer mechanism, and a second bunter carried on the main slide or carriage, and said second bunter adapted to be raised on the transfer of filling from the magazine into the running shuttle, and to raise the first mentioned bunter out of the path of the cam lever, and means for moving said dagger into the path of the knock-off lever to operate said lever and stop the loom when the filling from the new bobbin is not properly threaded into the running shuttle.

4. In a weft replenishing loom, a filling  
 fork, a dagger connected therewith, connec-  
 tions intermediate said dagger and a rock-  
 ing lever, and said rocking lever, adapted to  
 5 engage a bunter on the main slide of the fill-  
 ing stop motion, to move said bunter out of  
 operative position relatively to a cam lever,  
 and said cam lever, a dagger carried on said  
 main slide, a second slide on said main slide,  
 10 a bunter connected with said second slide,  
 and said slide adapted to operate to move  
 said dagger on the main slide to cause it to  
 put into operation the mechanism for select-  
 ing a bobbin from the magazine, and inter-  
 15 mediate connections between said dagger and  
 said selecting mechanism, comprising a yield-  
 ing or give-way lever, a vertically moving  
 rod adapted to be engaged by said lever, and  
 moved into operative, or inoperative position  
 20 relative to said selecting mechanism, and  
 connections intermediate said rod and the  
 transferring mechanism, to put into opera-  
 tion the transferring mechanism, and said  
 dagger also adapted to be moved into the  
 25 path of the knock-off lever to operate said

lever and stop the loom when the filling on  
 the new bobbin is not properly threaded into  
 the running shuttle.

5. In a weft replenishing loom, the combi-  
 nation with the main slide of the filling stop 30  
 motion, of a dagger carried thereon, and  
 adapted to be moved into the path of the  
 knock-off lever for stopping the loom, and  
 also into the path of a yielding or give-way  
 lever connected with the mechanism for select- 35  
 ing a bobbin from the magazine, and said  
 yielding or give-way lever, and a vertically  
 moving rod connected therewith and adapt-  
 ed to be moved into operative position rela-  
 tively to the selecting mechanism by the 40  
 movement of said give-way lever, and con-  
 nections intermediate said vertically moving  
 rod and the transferring mechanism, to  
 cause the operation of the transferring mech-  
 anism on the operation of the selecting mech- 45  
 anism.

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Witnesses:

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