

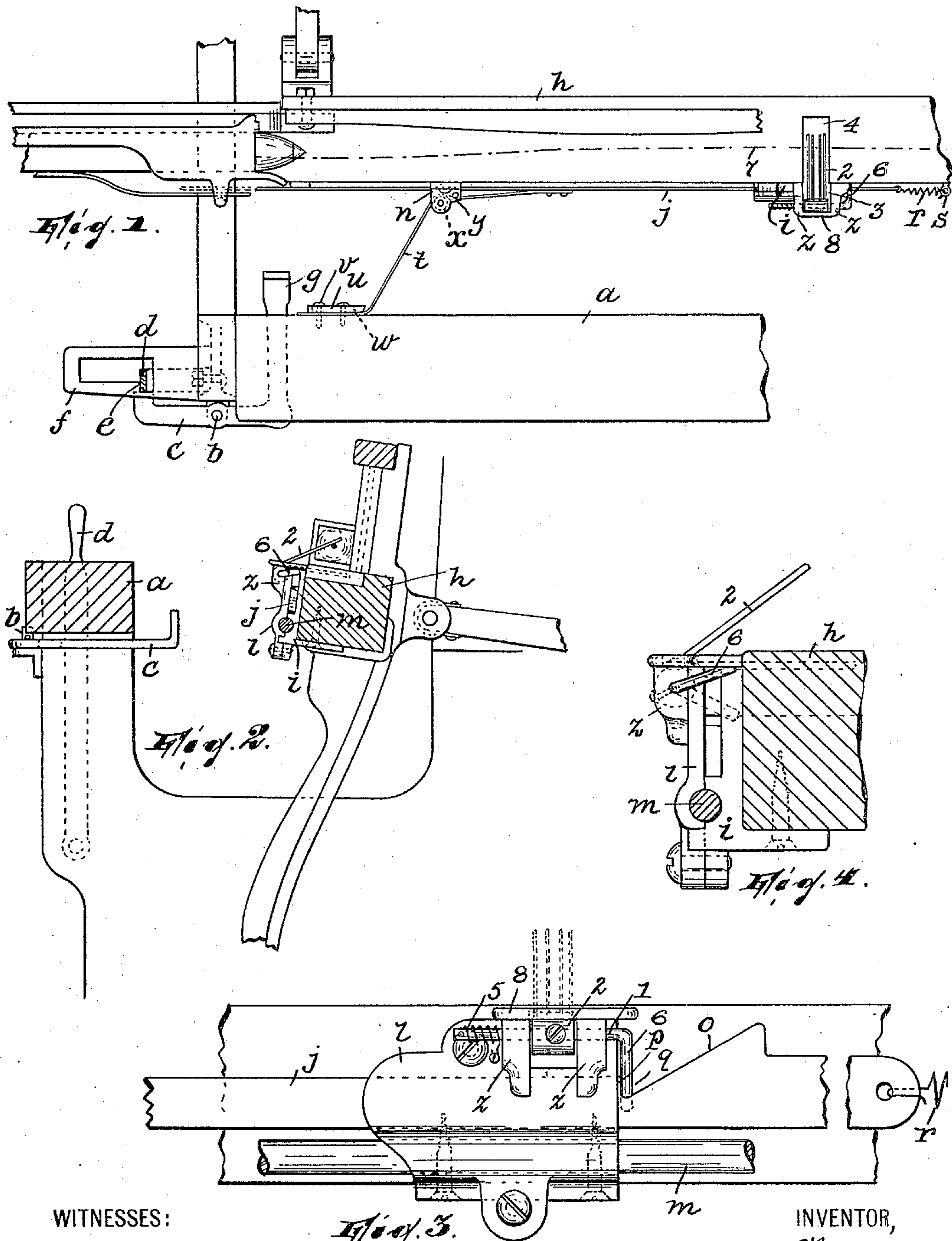
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A. D'HUYVETTERS.
WEFT STOP MOTION MECHANISM FOR LOOMS.

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NO MODEL.



WITNESSES:

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Fig. 3.

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WEFT-STOP-MOTION MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 755,464, dated March 22, 1904.

Application filed August 6, 1903. Serial No. 168,439. (No model.)

To all whom it may concern:

Be it known that I, AUGUST D'HUYVETTERS, a citizen of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Weft-Stop-Motion Mechanism for Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates to weft-thread or filler stop-motion mechanisms for looms; and it has reference particularly to that class of weft-thread or filler stop-motion mechanisms in which there are two coacting elements, of which one moves with reference to the other with a going part of the loom and of which one also is a part which directly governs the controller of the loom, while the other element normally has a movement substantially at right angles with that already referred to and so timed that said elements will always escape contact with each other unless a part which is controlled from the filler or weft-thread interrupts the second movement referred to, so that said elements are brought together during the next cycle of the loom's operation to cause the power to be thrown off.

The invention has for its principal objects to so construct and arrange the parts of the mechanism as to simplify them as much as possible, reduce to the minimum the wear and tear engendered, and make the mechanism positive and reliable in operation.

The invention will be found fully illustrated in the accompanying drawings, wherein—

Figure 1 is a top plan view of my invention applied to a loom, only so much of which latter is shown as is necessary to illustrate the invention. Fig. 2 is a transverse sectional view looking toward the left in Fig. 1. Fig. 3 is a view in front elevation of certain portions of the mechanism which are on the batten; and Fig. 4 is a sectional view of the batten, showing in end elevation what is seen in Fig. 3.

On the under side of the breast-beam *a* is

pivoted, as at *b*, a lever *c* of substantially the bell-crank form, one end of said lever being arranged adjacent the side of the controller *d*, which when engaged in the notch *e* of the bracket *f* acts through any well-known mechanism to keep the power on the loom, but which when released from said notch springs to the extremity of said bracket to throw off the power from the loom. The other end *g* of lever *c* projects toward the batten or lay *h*.

Against the front face of the lay *h* is secured a guide *i*, in which slides longitudinally of the batten a bar *j*, the same being kept in place in the guide by a plate *l*.

m is the ordinary protector-rod of the loom, held between guide *i* and plate *l*. It has no relation to the present invention, so further reference to it is unnecessary.

n is another guide, in which rod *j* slides and which is likewise arranged against the front face of the batten. The rod *j* is formed with an inclined surface *o* and with a shoulder *p*, the same combining to form a recess *q* in the top edge of the bar. A spring *r*, connecting the rod *j* with a hook *s* on the batten, normally pulls the rod toward the hook.

t is a strap or other flexible device which is secured at one end to the front face of the rod *j* and at its other end to the adjacent face of the breast-beam, in the latter case by means of a block *u*, which is secured to the breast-beam by screws *v*, extending through longitudinal slots *w* in the block, so as to afford adjustment. Strap *t* has a running engagement with guide *n* by being extended around a pulley *x*, comprised in guide *n* and between said pulley and a pin *y*, which acts as an essential portion of the guide to effect a true movement of the rod *j*.

The plate *l* is formed with spaced bearings *z*, in which is journaled the bearing-pin 1 for a weft-fork 2, which works up and down in a bifurcation 3, formed in the plate *l* and guide *i*, and a recess 4 in the batten. A spiral spring 5, coiled around the pin 1 and secured at one end to said pin, while its other end engages the plate, normally tends to depress the weft-fork.

One end of bearing-pin 1 is bent off at right angles to form a dog 6, arranged so that when

permitted to move far enough it will drop into the recess *q* and as the rod reciprocates in the regular actuation of the parts to wipe against the inclined surface *o*, so as to elevate the weft-fork and throw the same up out of the path of the shuttle.

Operation: As the batten moves forward and back, strap *t*, which is kept taut by the spring *r* pulling on rod *j*, causes said rod to reciprocate. When the batten is back, the rod is obviously drawn to the left to its extreme limit of motion in that direction, and when the batten is forward the spring pulls the rod to the right as far as the strap will permit. When the batten is back, the rod being in its extreme left position, the dog 6, engaging the inclined surface *o*, holds the weft-fork up, so that the shuttle may pass unobstructed by the weft-fork. As the batten moves forward and just before it reaches its forward limit of movement the weft-fork is permitted by the dog sliding down on the incline *o* to drop on the filler 7. If the filler is unbroken, it will sustain the weft-fork and so keep the dog up out of notch *q*, so that the rod can move to its extreme limit of movement to the right under the actuation of the spring *r*, and thus clear the end *g* of lever *c*. If, however, the filler is broken, the weft-fork will be permitted to fall by gravity, so that the dog will enter recess *o* and impinge against the shoulder *p* of rod *j*, so as to prevent the rod from moving farther to the right, notwithstanding the further relaxation on the strap produced by the batten continuing to move nearer to the breast-beam. The result will then be that the end of the rod adjacent

lever 2 will engage end *g* of said lever, turning the latter on its pivot and so throwing the controller *d* out of the notch so that the power will be thrown off the loom. A guard 8 may be employed to bridge the bifurcation in plate *l*, so as to keep the warp from dropping down in said bifurcation whenever, as in picking back, the warp is slackened.

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

The combination of the loom-frame, the batten, the controller, a movable member mounted on the frame and engaging said controller, a recessed bar mounted on the batten and adapted to engage said movable member, a spring connected at one end to the batten and at the other end to said bar, a catch controlled from the filler and engageable in the recess of said bar for holding the bar in position to engage said movable member upon a break in the filler, a plurality of guides on the batten through which said bar passes, a strap secured at one end to said bar intermediate of said guides and at the other end to said frame, said strap having a running engagement with one of said guides whereby the pull of the strap will be always in the direction of the longitudinal movement of the bar.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of August, 1903.

AUGUST D'HUYVETTERS.

Witnesses:

JOHN W. STEWARD,
ROBERT J. POLLITT.