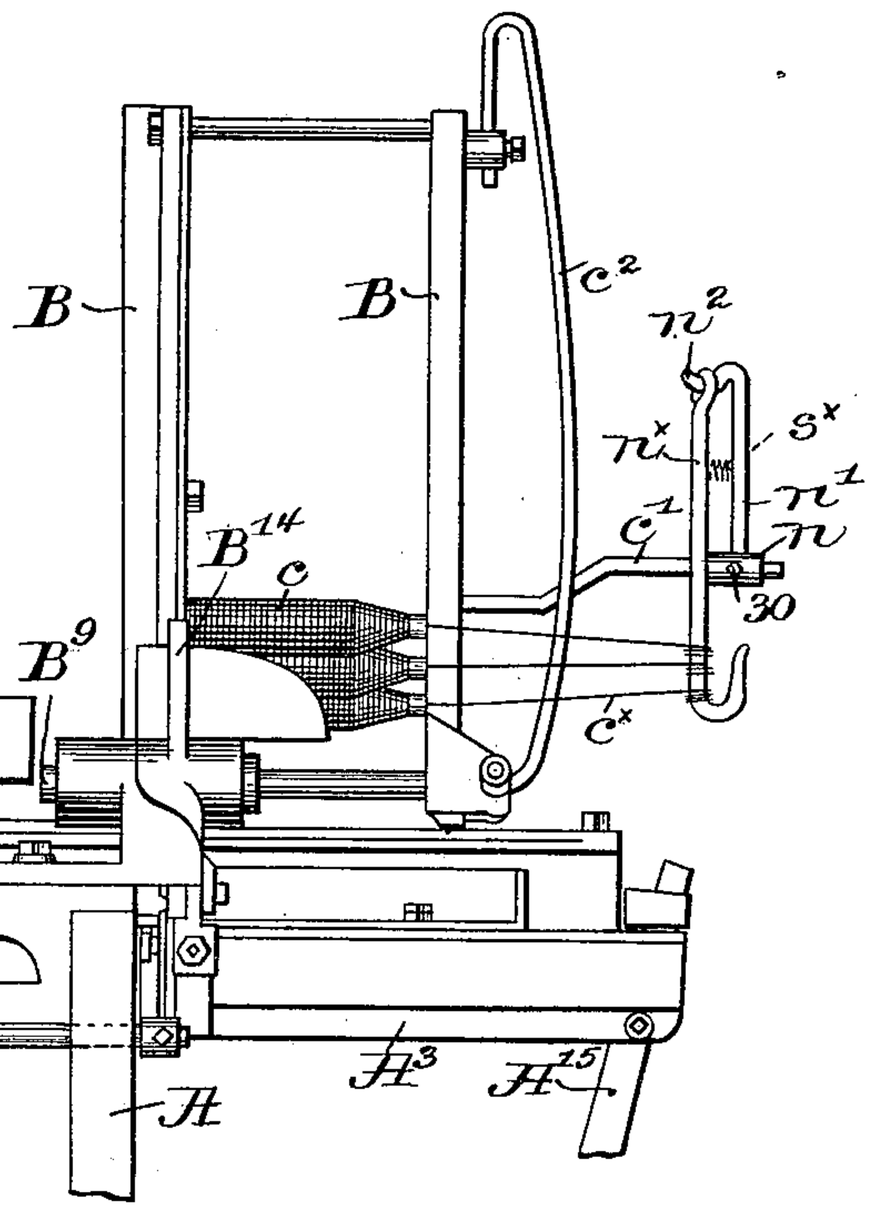
No. 626,201. Patented May 30, 1899.

G. O. DRAPER.

FILLING-END HOLDER FOR AUTOMATIC LOOMS.

(Application filed Sept. 1, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE O. DRAPER, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO THE DRAPER COMPANY, OF SAME PLACE AND PORTLAND, MAINE.

FILLING-END HOLDER FOR AUTOMATIC LOOMS.

SPECIFICATION forming part of Letters Patent No. 626,201, dated May 30, 1899.

Application filed September 1, 1898. Serial No. 689,977. (No model.)

To all whom it may concern:

Be it known that I, GEORGE O. DRAPER, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-End Holders for Automatic Looms, of which the following description, in connection with the accompanying drawing, is a specification, like letters and figures on the drawing representing like parts.

In looms of the Northrop type, wherein automatic filling-supplying mechanism is provided, the several filling-carriers are mounted ready for use in a hopper of suitable construction, and the filling ends are led to a fixed stud or other device, to which they are secured, a loom of the type specified forming the subject-matter of United States Patent No. 470,590, dated March 8, 1892.

The sharp blow of the picker-stick on the shuttle has been found in practice to exert such a shock on the filling end of a fresh supply of filling just previously transferred from the hopper that it frequently breaks, the strength of the filling being unable to resist the sudden strain put upon its end attached to the holding-stud.

My present invention has for its object the production of means for obviating this defect, and I accomplish the desired result by providing a filling-end holder which is free to yield within certain limits when sudden strain is put upon the filling and to return to normal position when such strain is withdrawn.

The drawing represents in side elevation a circular hopper, such as shown in the patent referred to, with one embodiment of my invention applied thereto.

In the drawing I have shown my invention applied to filling-supplying mechanism including a hopper or filling-feeder, such as shown in United States Patent No. 470,590, dated March 8, 1892, wherein the filling supplies *c* were held in a hopper B, comprising, essentially, two upright members having guideways at their inner faces to retain in position a series of superposed bobbins or filling-carriers. The lay A^3, picker-stick A^{15}, the controlling or operating shaft d', the pusher or transferrer B^{14}, having its fulcrum at B^9, the stud c', connected with the hopper, and the slack-thread controller c^2 to prevent entanglement of the filling ends extending from the series of filling-carriers in the hopper are and may be all as in said Patent No. 470,590.

On the stud c' I have mounted a hub or sleeve n, held in place by a suitable set-screw 30 and having an upwardly-extended arm n', provided with a lateral hooked ear n^2, upon which is pivotally mounted a depending filling-end holder $n^\times$, about which the filling ends $c^\times$ are wound or otherwise secured. When a filling-carrier is transferred and the shuttle thrown across the lay by the adjacent picker-stick, the depending holder $n^\times$ will swing in toward the hopper B when strain is exerted on the filling end, thus obviating a sudden shock thereto and risk of breakage. After the transferred filling-carrier has made one or more shots across the lay the filling end may be cut or otherwise severed, and the end-holder $n^\times$ returns to normal position. This return of the end-holder may be assisted, if desired, by the interposition of a suitable spring, as $s^\times$, attached at its ends to the holder and its supporting-arm n'.

It will be obvious that my invention is just as applicable to those filling-changing mechanisms wherein a fresh shuttle is transferred from the hopper as to that herein illustrated, wherein only the filling-supply itself is transferred, the desirability for a yielding filling-end holder being as great in the one case as in the other.

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

1. In filling-changing mechanism for looms, a hopper or feeder to contain a plurality of supplies of filling, and an elastic filling-end holder for the several ends of filling.

2. In filling-changing mechanism for looms, a hopper or feeder to contain a plurality of filling-carriers, means to transfer the filling-carriers singly into operative position, and an elastic holder for the filling ends, adapted to move or yield when strain is exerted upon the filling end of a moving filling-carrier.

3. In filling-changing mechanism for looms, a hopper or feeder to contain a plurality of

supplies of filling, a filling-end holder adapted to move by strain on the filling end in the direction of movement of a filling-supply after transfer from the hopper, a transferrer, and means to return the filling-end holder to normal position after relaxation of strain upon the filling end.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE O. DRAPER.

Witnesses:

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