

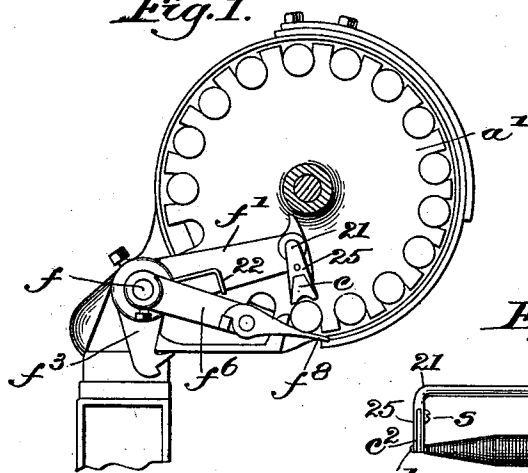
(No Model.)

J. L. BURTON.  
FILLING CHANGING MECHANISM FOR LOOMS.

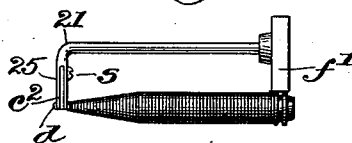
No. 591,998.

Patented Oct. 19, 1897.

*Fig. 1.*

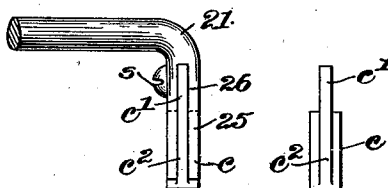


*Fig. 2.*



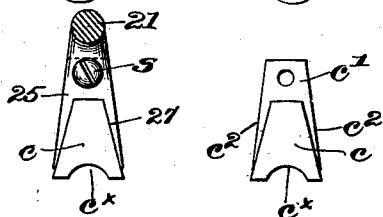
*Fig. 3.*

*Fig. 5.*



*Fig. 4.*

*Fig. 6.*



*Witnesses:*

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*Thomas Drummond,*

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# UNITED STATES PATENT OFFICE.

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DRAPER COMPANY, OF SAME PLACE AND PORTLAND, MAINE.

## FILLING-CHANGING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 591,998, dated October 19, 1897.

Application filed June 11, 1897. Serial No. 640,322. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. BURTON, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-Changing Mechanism for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

In the well-known type of Northrop loom, wherein a filling-carrier is automatically transferred from a rotatable feeder or hopper into the shuttle, upon failure or exhaustion of the filling therein, as in United States Patent No. 529,940, dated November 27, 1894, such transfer is accomplished by a pusher or transferer which engages the filling-carrier while it is held in the feeder or hopper. The change is made very rapidly and the metallic transferer acts with such force in practice that very often the yarn is cut or damaged. This is not apparent when using a bobbin, as the wood thereof will yield sufficiently to prevent damage to the thread, but with the metal cop-spindle very largely used metal is opposed to metal, with sometimes only one layer of thread between, and the thread will be cut or pinched.

In my present invention I provide the extremity of the transferer with a yielding cushion, whereby the impact of the transferer will not damage any portion of thread between it and the tip of the spindle of the cop or filling carrier.

Figure 1, in end elevation and partial section, represents a sufficient portion of a filling-changing mechanism to be understood with my invention applied thereto. Fig. 2 is a side elevation of the transferer in engagement with a filling-carrier. Figs. 3 and 4 are enlarged side and inner end views of the transferer provided with a cushion in accordance with my invention; and Figs. 5 and 6 are edge and front views of a convenient form of cushion, detached.

The filling-changing mechanism shown in Fig. 1 is substantially that shown in United States Patent No. 529,942, dated November 27, 1894, comprising, essentially, a rotatable feeder, only one member  $a'$  being herein shown; the stud  $f$ ; the transferer  $f'$ , mounted thereon and having the downturned end  $f^3$  and a finger 21; the lifting-spring 22; the arm  $f^6$ , and a tip supporting or directing de-

vice  $f^8$ , which are and may be all substantially as represented in said patent. As herein shown the bent end 25 of the finger 21 is flattened, transversely slotted at 26, and recessed at its extremity at 27, to receive a cushion  $c$ , of rubber or other suitable yielding material. The main portion of the cushion is shaped to enter the recess 27, and it is extended at  $c'$  and reduced in thickness to enter the transverse slot 26 in the end of the finger 21 of the transferer, the reduced portion also forming side ribs  $c^2$ , which, entering the slot 26 adjacent the recess, serve to prevent lateral displacement of the cushion. A suitable screw  $s$  secures the cushion in place in the finger 21, and a concavity  $c^x$  is preferably made in the outer end of the cushion, to engage the end of the spindle  $d$  of the filling-carrier, as shown in Fig. 2. Should a portion of the filling-thread be caught between the spindle of the filling-carrier and the cushion of the transferer the yielding character of the cushion will prevent damage to such portion of the thread.

My invention is not restricted to the precise shape of the cushion herein shown, as the same may be varied without departing from the spirit and scope of my invention.

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

1. In an apparatus of the class described, a transferer for the filling-carrier, and a yielding cushion carried by said transferer to engage with the filling-carrier, as and for the purpose described.

2. A transferer for filling-changing mechanism, having a recessed end, and a yielding cushion mounted therein to engage the tip end of the filling-carrier, substantially as described.

3. A transferer for filling-changing mechanism, having a recessed and transversely-slotted end, and a yielding cushion inserted in the recess and provided with ribs to enter the transverse slot, substantially as described.

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

JOHN L. BURTON.

Witnesses:

GEO. OTIS DRAPER,  
HERBERT S. MANLEY.