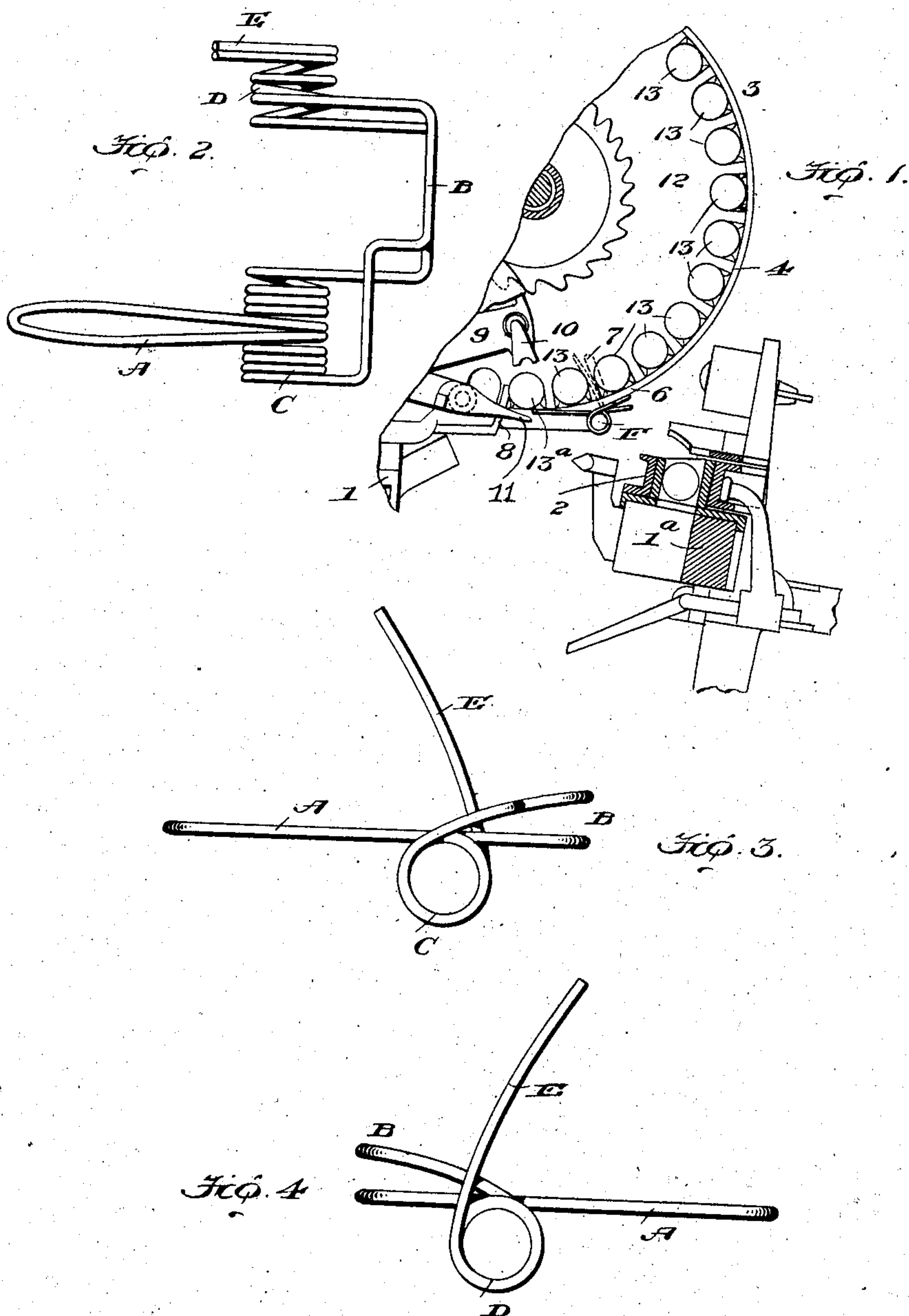


No. 835,093.

PATENTED NOV. 6, 1906.

E. BENOIT.
FILLING REPLENISHING MECHANISM FOR LOOMS.
APPLICATION FILED APR. 23, 1906.



Witnesses

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ELI BENOIT, OF BLACKSTONE, MASSACHUSETTS.

FILLING-REPLENISHING MECHANISM FOR LOOMS.

No. 835,093.

Specification of Letters Patent.

Patented Nov. 6, 1906.

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To all whom it may concern:

Be it known that I, ELI BENOIT, a citizen of the United States, residing at Blackstone, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Filling-Replenishing Mechanism for Looms, of which the following is a specification.

My invention pertains to filling-replenishing mechanism for looms, and more particularly to means for yieldingly supporting a filling-carrier precedent to the removal of the said filling-carrier from the feeder to the shuttle and for supporting and guiding the filling-carrier as it passes into the shuttle; and it has for its object to provide a simple and inexpensive device for the purpose stated embodying such a construction that there is no liability of either the device, the shuttle-box, or the shuttle being broken in the event of the cushioning or buffer arm of the device catching into the shuttle-box, as frequently happens. This will be better appreciated as an important step forward in the art when it is remembered that breakage of shuttle-boxes, which are generally made of cast-iron, necessitates considerable and expensive repairs to looms.

With the foregoing in mind the invention will be fully understood from the following description and claim when the same are read in connection with the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a transverse section of so much of a well-known type of loom as is necessary to illustrate the manner in which the device constituting the present and preferred embodiment of my invention is applied and used.

Fig. 2 is an enlarged top plan view of the novel device removed. Fig. 3 is an enlarged elevation of one side of the device, and Fig. 4 is a similar view of the opposite side of the device.

Similar numerals and letters of reference designate corresponding parts in all of the views of the drawings.

The loom-frame 1, the lay 1^a, the shuttle 2, the circular stand 3, having the flange 4, the lugs 7 on the back of the stand 3, the guide-stop 8 on the stand, the transferrer 9, having the downturned part 10, the tip-supporting device 11, the feeder-disks 12, but one of which is illustrated, and the filling-carriers 13 13^a are preferably, though not necessarily, of the same construction as the correspond-

ing parts of a well-known type of filling-replenishing mechanism and are designed to operate in the usual manner.

The filling-carrier 13^a of the series is shown against the stop 8 and in position to be transferred. On the forward movement of the feeder, after a transfer, the stop 8 engages the filling-carrier next to be transferred and maintains the feeder at rest. The last-mentioned filling-carrier is yieldingly supported and guided on the opposite side with reference to the stop 8 by a cushioning or buffer arm A, forming part of my novel device, the said arm A being located adjacent the inner face of the feeder-disk 12 and opposite the stop 8.

My novel device is formed of wire, and in addition to the mentioned cushioning or buffer arm A it comprises a swinging frame B, combined hubs and coiled springs C and D, carried by the swinging frame, and a finger E, which is preferably formed by the terminals of the piece of wire comprised in the device, as shown, and is held up and against the stop 7 at the opposite side of the stand 3 with reference to the arm A by the coiled springs C and D. A pin F, pressed through the combined hub and coiled spring C, the stand 3, and the combined hub and coiled spring D, in the order named, serves to pivotally support my novel device. The stop 8 forms one side of a passage through which the filling-carrier passes to the shuttle 2, the cushioning or buffer arm A forming the other side, and when the transferrer 9 descends to remove the filling-carrier from the feeder to the shuttle the cushioning or buffer arm yields and supports and guides the filling-carrier as the same passes into the shuttle.

In the event of the cushioning or buffer device failing to work freely and the arm A being caught in the shuttle-box it will be seen that the said arm, being made of wire and possessed of resiliency, will bend and release itself from the shuttle-box, and hence there is no liability of either the shuttle-box, the shuttle, or my novel device being broken.

As will be gathered from the foregoing, the parts C and D, serving the twofold functions of hubs and springs, render it unnecessary to employ an extraneous spring for returning the device to and normally holding it in the position shown in Fig. 1.

It will be gathered from the foregoing that in virtue of the cushioning or buffer arm A of the device extending from the middle of the hub and coiled spring C the resiliency of said

arm is increased, as is also the strength of the connection between said arm and the remainder of the device, and it will also be gathered that in addition to adding to the resiliency of the device the coiled spring D materially strengthens the connection of the same to the stand.

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

In a filling-replenishing mechanism for looms, the combination with a stand, a rotatable filling-feeder, a lay, a transferrer, and a stop forming one side of a passage for filling carriers from the feeder; of a device comprising combined hubs and coiled springs disposed at opposite sides of the stand, a frame carrying the combined hubs and coiled springs

and straddling the stand, a loop-shaped, resilient or springy arm extending from the middle of one hub and coiled spring and adapted to yieldingly support and guide filling-carriers, and a finger extending from the other hub and coiled spring and disposed against an abutment on the stand, and a pin extending through the hubs and springs of the device and the stand and pivotally connecting the former to the latter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ELI BENOIT.

Witnesses:

JOS. W. NICHOLS,

EDGAR L. SPAULDING.