

No. 708,524.

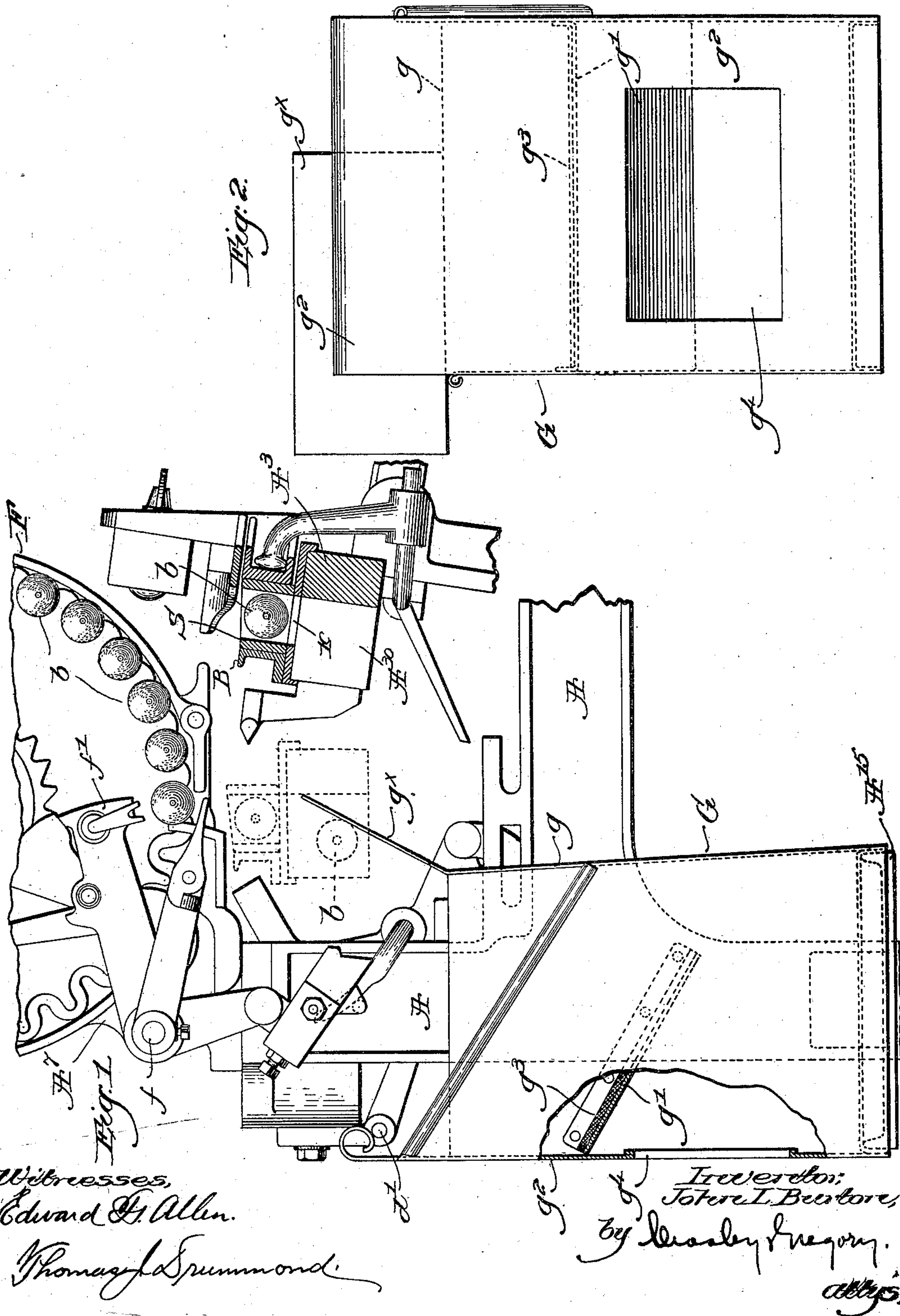
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J. L. BURTON.

FILLING CARRIER RECEPTACLE FOR WEFT REPLENISHING LOOMS.

(Application filed May 1, 1902.)

(No Model.)





# UNITED STATES PATENT OFFICE.

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## FILLING-CARRIER RECEPTACLE FOR WEFT-REPLENISHING LOOMS.

SPECIFICATION forming part of Letters Patent No. 708,524, dated September 9, 1902.

Application filed May 1, 1902. Serial No. 105,446. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. BURTON, a citizen of the United States, and a resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-Carrier Receptacles for Weft-Replenishing Looms, of which the following description, in connection with the accompanying drawings, is a specification, like characters  
10 on the drawings representing like parts.

This invention relates to that type of weft-replenishing looms wherein one of the shuttle-boxes has an opening in its bottom for the discharge therethrough of a filling-carrier  
15 ejected from the shuttle at the time a fresh filling-carrier is automatically inserted therein. The ejected filling-carriers are discharged with very considerable force and velocity, and in order to prevent them from falling or  
20 being thrown into other parts of the loom or about the floor it is customary to provide each loom with a receptacle, into which the filling-carriers are directed when ejected. It is necessary for the attendant to remove them  
25 from such receptacle from time to time, and if at such time a filling-carrier is ejected from the shuttle and strikes the hand of the attendant a painful injury is apt to result, it being understood that the heads of the filling-  
30 carriers are commonly provided with metallic rings or bands, and metallic cop-skewers are also frequently used.

The present invention has for its object the production of simple and efficient means  
35 for obviating such danger to the operative as hereinbefore referred to, so that the contents of the receptacle can be withdrawn from time to time without exposing the hands to painful and sometimes serious injury.

40 The various novel features of my invention will be hereinafter described, and particularly pointed out in the following claims.

Figure 1 is a transverse sectional view of a portion of a loom provided with automatic  
45 filling-replenishing mechanism, with one embodiment of my present invention applied thereto; and Fig. 2 is a front elevation of the receptacle for the filling-carriers, shown in side elevation and partly broken out in Fig. 1.

50 Referring to Fig. 1, the main frame A, the lay A<sup>30</sup>, having at one end thereof a shuttle-box B, provided with a discharge-opening 10 in its

bottom to communicate with a cut-away portion A<sup>30</sup> in the front side of the lay beneath the shuttle-box, the filling-replenishing mechanism comprising a rotatable hopper or feeder  
55 F to receive the filling-carriers *b*, the transferer *f'*, fulcrumed at *f* on the stand A<sup>7</sup>, on which the feeder is supported, the actuating means for the replenishing mechanism, including the controlling rock-shaft *d'*, may be  
60 and are all substantially as shown and described in United States Patent No. 691,734, dated January 21, 1902, an ejected filling-carrier being discharged by the incoming  
65 fresh one from the shuttle S through the opening 10 and the cut-away portion A<sup>30</sup> of the lay. A change of filling is effected when the lay beats up into the dotted-line position  
70 shown in Fig. 1, and I have provided a receptacle to receive the discharged filling-carrier and a device to direct the latter to the receptacle. The receptacle for the spent or exhausted  
75 filling-carriers is shown as an upright open box G, preferably made of sheet metal and supported on a shelf A<sup>15</sup>, secured to the loom side A at its under side adjacent the filling-replenishing side of the loom.

The back wall *g* has secured to it or forming a part thereof an upturned and rear-  
80 wardly-inclined guide-lip *g*<sup>x</sup>, which may be made resilient or flexible, as in the patent referred to, and so positioned that when the lay is in dotted-line position, Fig. 1, in readiness for a change of filling the upper end of  
85 the lip will extend into the cut-away portion A<sup>30</sup> of the lay beneath the opening 10. A filling-carrier ejected from the shuttle passes through the opening 10 onto the inclined lip  
90 *g*<sup>x</sup> and slides down thereon to the open top of the box, the lip being laterally offset, as shown in Fig. 2, to permit free movement of the picker-stick. In the patent referred to the filling-carrier slides from the guide-lip  
95 directly into the box; but herein I have shown the latter provided with a transverse guard (shown as a shelf *g'*) extended from one to the other side wall of the box and inclined from  
its front wall *g*<sup>2</sup> downward toward the rear wall and located below the lower end of the  
100 guide-lip *g*<sup>x</sup>. A clearance or opening is thus left between the lower edge of the guard and the back wall, and the filling-carrier slides from the guide-lip onto the guard and thence



through the clearance or opening to the bottom of the box. In order to break the fall of the filling-carriers as they are discharged down the guide-lip, I prefer to mount a cushion  $g^3$  on the upper face of the guard, said cushion being a sheet of rubber, felt, or other suitable soft and durable material.

The front wall  $g^2$  of the box has an opening  $g^4$  therein below the guard, and when the operative wishes to withdraw filling-carriers from the box he inserts his hand through the opening  $g^4$  and withdraws them therethrough. It will be manifest that when so doing the guard  $g'$  effectually protects the hand of the operative from injury by a discharged filling-carrier entering the box, as it must first strike the guard, its movement being arrested thereby, and then it slides or rolls down through the clearance into the lower part of the box. The cushion on the guard breaks the force of the blow to the filling-carrier as it strikes and obviates any tendency to split or splinter or be otherwise injured when discharged.

My invention is simple, cheap, and prevents damage to both the operative and the discharged filling-carriers and effects the desired purpose in a very effective manner.

The opening  $g^4$  in the front of the box is convenient of access and obviates stooping down and extending the arm and hand into the box from the top thereof.

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

1. In a loom, a lay provided with a shuttle-box having an opening in its bottom for the discharge of a filling-carrier, a stationary receptacle having an upturned and rearwardly-inclined guide-lip to extend beneath said opening when the lay beats up, and an oppositely-inclined deflector below the lip within the receptacle, the latter having an opening in its wall below the deflector to permit withdrawal of filling-carriers directed from the deflector to the bottom of the receptacle.

2. In a loom, a lay provided with a shuttle-box having an opening in its bottom for the discharge of a filling-carrier, a stationary receptacle having an upturned and rearwardly-inclined guide-lip to extend beneath said opening when the lay beats up, and an oppositely-inclined guard or deflector below the guide-lip and within the receptacle and cushioned on its upper face, a filling-carrier passing from the guide-lip onto the deflector and being conducted thence to the bottom of the receptacle, the latter having an opening in its front wall below the deflector, for withdrawal of filling-carriers.

3. In a loom, a lay provided with a shuttle-box having an opening in its bottom for the discharge of a filling-carrier, the lay being cut away in front beneath the opening, a stationary receptacle having an upturned and rearwardly-inclined guide-lip to enter the cut-away portion of the lay and extend beneath the opening in the shuttle-box when

the lay beats up, and an oppositely-inclined deflector extended across the receptacle below the lip, with a clearance between the lower edge of the deflector and the back of receptacle, the latter having an opening in its front wall below the deflector, through which may be removed filling-carriers directed from the lip to the deflector and thence to the bottom of the receptacle.

4. In a loom, a lay provided with a shuttle-box having an opening in its bottom for the discharge of a filling-carrier, a stationary receptacle having an open top and positioned to receive a discharged filling-carrier when the lay beats up, said receptacle having an opening in one of its walls, and an inclined deflector within the receptacle above the said opening to guard or shield from an incoming filling-carrier the hand of the attendant when inserted in the wall-opening.

5. In a loom, a lay provided with a shuttle-box having an opening in its bottom for the discharge of a filling-carrier, a stationary receptacle having an open top and positioned to receive a discharged filling-carrier when the lay beats up, and an inclined deflector within the receptacle below its top, said deflector being cushioned on its upper face, a discharged filling-carrier falling onto the deflector and being conducted thence to the bottom of the receptacle, the latter having an opening in one of its walls below and guarded or shielded by the deflector, to permit withdrawal of filling-carriers.

6. A receptacle for discharged filling-carriers, consisting of a box having an open top, and an inclined guard or deflector within the box below its top and extended from one wall part way toward the opposite wall, the box having an opening in the wall of the box below and shielded by the guard or deflector.

7. A receptacle for discharged filling-carriers, consisting of a box having an open top, and an inclined guard or deflector fixedly mounted within the box below its top and extended from the front wall thereof part way toward its back wall, and a cushion on the upper face of the deflector, the box having an opening in its front wall below the guard or deflector.

8. A receptacle for discharged filling-carriers, consisting of a box having an open top and an upturned, rearwardly-inclined guide-lip at its back, an oppositely-inclined guard or deflector within the box below the guide-lip, extended from the front wall of the box part way toward its back wall, and a cushion on the upper face of the guard or deflector, the box having an opening in its front wall below the said guard or deflector.

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

JOHN L. BURTON.

Witnesses:

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MYRON J. BIGELOW.