

1,308,202.

Fig.1.

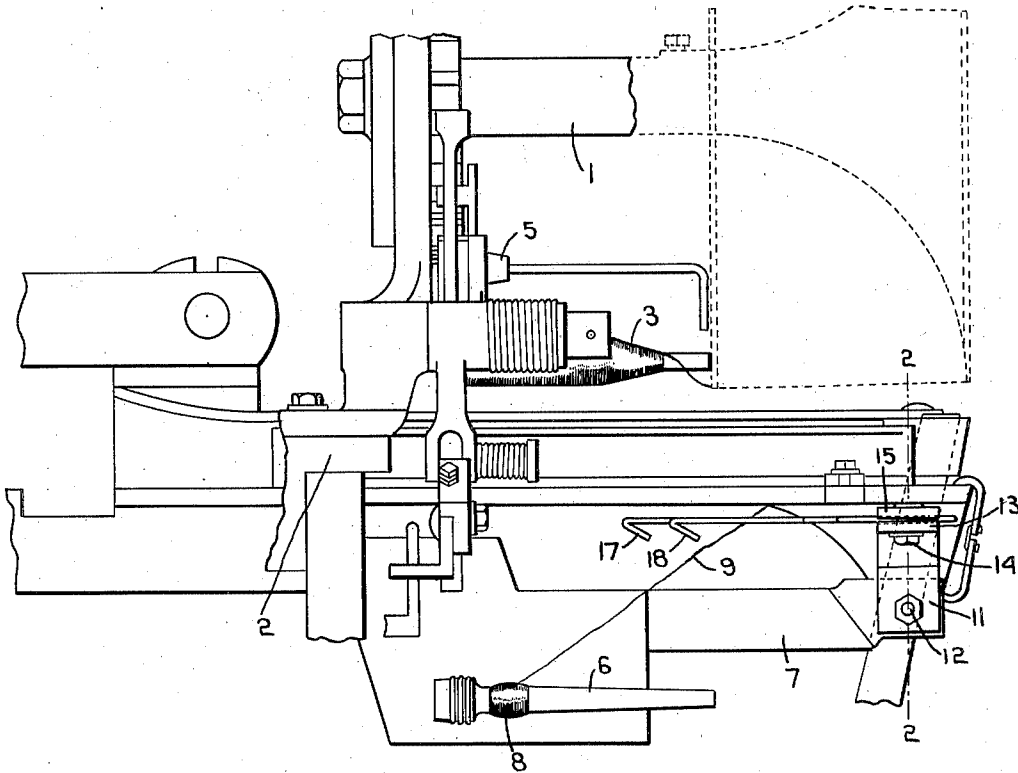
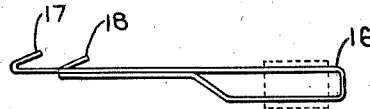
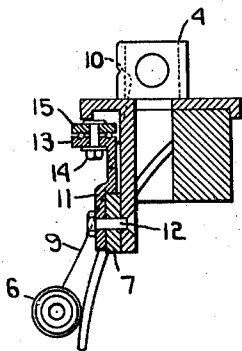


Fig. 3.



Inventor.
Edward S. Stimpson
by *Heard Smith & Tennant*
Attys.

UNITED STATES PATENT OFFICE.

EDWARD S. STIMPSON, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO DRAPER CORPORATION, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

FILLING-CATCHER FOR LOOMS.

1,308,202.

Specification of Letters Patent.

Patented July 1, 1919.

Application filed August 13, 1918. Serial No. 249,647.

To all whom it may concern:

Be it known that I, EDWARD S. STIMPSON, a citizen of the United States, residing at Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-Catchers for Looms, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to looms wherein during the operation of the loom a spent filling carrier is ejected from the shuttle. In such cases the spent filling carrier is usually left with a small bunch of filling thereon and this filling trails back through the eye of the shuttle to a point where it is broken or severed by instrumentalities usually connected to the loom. When as in the case of the automatic filling replenishing loom a fresh filling carrier is transferred into the shuttle it is important that the trailing filling from the ejected filling carrier shall be cleared from the shuttle. Otherwise it may be entangled with the fresh filling and woven into the cloth.

The object of this invention is to provide a simple and efficient means of the type shown in the patent to Chase No. 1,253,148, granted January 8, 1918, of which the present invention is an improvement, for insuring that the trailing end of the filling extending from the ejected filling carrier through the shuttle eye shall be cleared from the shuttle eye as the shuttle starts on its pick to the opposite side of the loom.

This object and the features of the invention will more fully appear from the accompanying description and drawing and will be particularly pointed out in the claims.

The drawings illustrate so much of a well known type of automatic filling replenishing loom as is necessary to a disclosure of the invention with a preferred form of the invention embodied therein.

In the drawings,

Figure 1 is a front elevation of a portion of the magazine end of an automatic filling replenishing loom of the well known Northrop type showing a preferred form of invention embodied therein and with the spent filling carrier just ejected from the shuttle;

Fig. 2 is a view in vertical transverse cross section taken on the line 2—2 of Fig. 1;

Fig. 3 is a top plan view of the looped wire member provided with a plurality of hooks constituting the filling catcher which is added to the loom in the preferred embodiment of the invention.

This invention relates only to the control of the trailing end of filling from a spent filling carrier after it is discharged from the shuttle and so the particular construction or type of loom in which it is embodied is immaterial to the scope of the invention. But the invention is of peculiar value in connection with an automatic filling replenishing loom wherein upon the substantial exhaustion of the filling a fresh filling carrier from a magazine or hopper is automatically transferred into the shuttle on the lay and simultaneously the spent filling carrier is ejected therefrom and falls into a can placed beneath the loom.

The drawings accordingly illustrate a portion of the well known Northrop automatic filling replenishing loom wherein a hopper or magazine 1 is supported from the breast beam 2 at one end of the lay and contains a supply of fresh filling carriers 3. When the filling in the running shuttle becomes substantially exhausted and the shuttle 4 is boxed at the magazine end of the lay through automatic mechanism well known to those familiar with this art a transferrer 5 is operated to transfer a fresh filling carrier 3 from the hopper into the shuttle 4 therebeneath and simultaneously to force out or eject the spent filling carrier 6. For this purpose the shuttle is open at the top and bottom. As the spent filling carrier passes out from the bottom of the shuttle it falls against a directing apron 7 attached to the lay and by which it is directed into a can placed beneath the loom.

In order that the change of filling carriers may take place without leaving any imperfection in the cloth a few picks of filling remain upon the ejected filling carrier usually in the form of a small bunch 8 and the spent filling end 9 trails from the bunch 8 back through the eye 10 of the shuttle. It also extends a considerable distance from the eye of the shuttle back toward the fell of the cloth depending upon the point at

which it is cut or broken. This end must be cleared from the shuttle eye or it will become entangled with the filling of the fresh filling carrier and produce trouble and even in some cases be woven into the cloth.

In order to insure the clearing of the trailing end of the spent filling from the shuttle this invention provides a member secured to the lay and provided with a plurality of hooks separated longitudinally of the lay and so arranged that the said hooks project toward the transfer end of the lay and preferably in a downward direction adjacent the path of the filling trailing from the ejected filling carrier through the shuttle eye. These hooks are located between the said trailing filling and the opposite side of the loom so that when the shuttle starts on the reverse pick the trailing filling is caught by one or the other of these hooks, retarded thereby, and thus drawn out from the shuttle.

In the construction illustrated as the preferred form of the embodiment a clamping bracket 11 is secured to the front face of the lay at its extreme end and projects upwardly along the side of the lay. This bracket is preferably secured in place by the same bolt 12 which is used to secure the apron 7 to the lay. At its upper end the bracket 11 presents a forwardly projecting shelf or plate 13 upon which is clamped by a suitable bolt 14 a clamping plate 15. The trailing end catching member proper is preferably formed of a single piece of wire and is shown separately in Fig. 3. This wire member is bent at the right hand end into a long flat loop 16 and the free ends of the member are bent into a plurality, here shown as two, hooks 17 and 18 separated from each other longitudinally or in the direction of the lay when the member is in place. This looped wire member is secured in position by placing the flat loop 16 between the shelf 13 and clamping plate 15 and then clamping these parts together so as to hold the looped member rigidly in position with the free ends projecting toward the opposite side of the loom along the front of the lay adjacent the path of the trailing filling. The hooks project toward the transfer end of the lay and preferably downwardly and rearwardly.

The operation of the device will now be apparent. When the spent filling carrier 6 is ejected from the shuttle the filling 9 trailing therefrom will extend down behind the

free end of the looped wire member and to the right of one or the other of the plurality of hooks such as 17 and 18. Consequently as the shuttle starts on the reverse pick the filling will reeve about one or the other of these hooks and be retarded thereby so as to cause the withdrawal of the spent filling end from the shuttle eye. The action is a quick one because the parts are in motion and it is aided by the fall of the spent filling carrier into the can. The hooks are sufficiently spaced longitudinally of the lay so that whatever may be the position of the trailing filling end it is given a quick turn about one or the other of the hooks and the retarded action is so aided by the momentum of the parts that the spent filling end is readily withdrawn through the shuttle eye.

The device is simply and easily manufactured and is readily applied to existing looms without any alteration thereof. The preferred form of structure disclosed enables the plurality of hooks to be rigidly and accurately held in the required position.

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

1. A loom comprising means for ejecting a spent filling carrier from the shuttle when at the end of its pick, a clamping bracket secured to the transfer end of the lay, a looped wire member having its looped portion clamped and held in said bracket with its free ends projecting along the front of the lay adjacent the path of the trailing filling from the ejected filling carrier through the shuttle eye and having its free ends formed into a plurality of longitudinally separated hooks located between the said trailing filling and the opposite side of the loom whereby as the shuttle starts on the reverse pick the trailing filling is caught and retarded by one or the other of the said hooks and thus drawn out from the shuttle.

2. A filling catching member for a loom composed of a single piece of wire bent to form a loop shaped clamping section with the free ends of the said wire extending parallel to each other from said looped section and bent into a plurality of longitudinally separated hooks.

In testimony whereof, I have signed my name to this specification.

EDWARD S. STIMPSON.