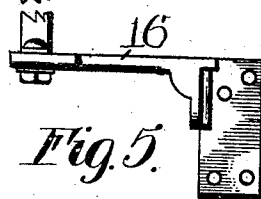
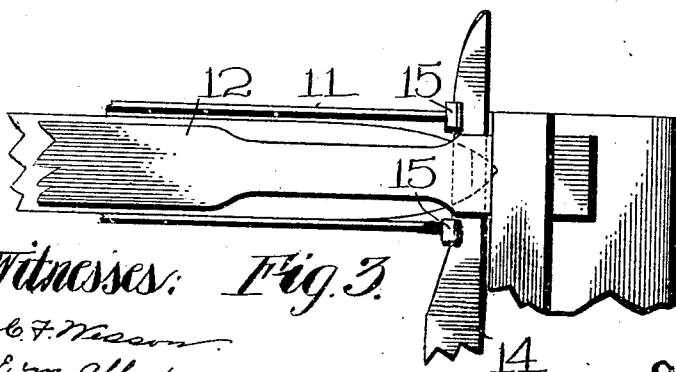
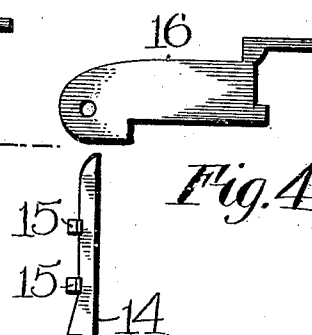
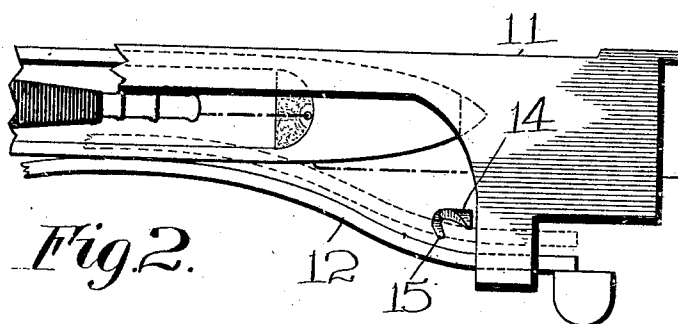
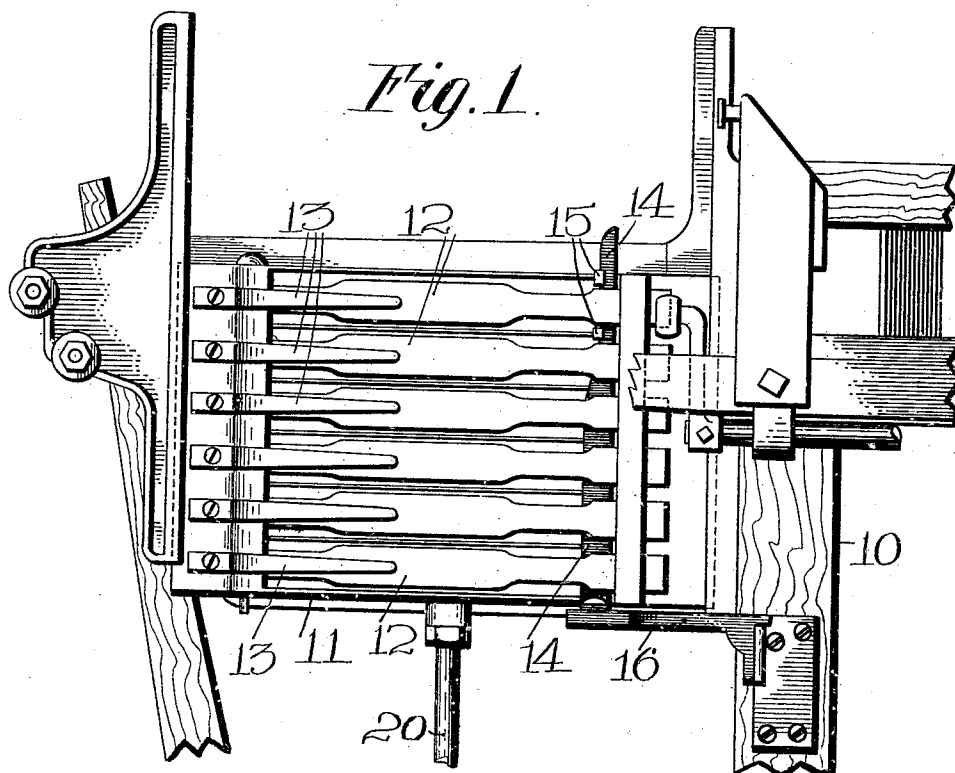


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SMASH PREVENTER FOR LOOMS.  
APPLICATION FILED MAR. 15, 1909.

947,003.

Patented Jan. 18, 1910.



Witnesses: *Fig. 3.*

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# UNITED STATES PATENT OFFICE.

WILLIAM LONZO, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR TO JOHN L. PARKER COMPANY, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

## SMASH-PREVENTER FOR LOOMS.

947,003.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed March 15, 1909. Serial No. 483,378.

*To all whom it may concern:*

Be it known that I, WILLIAM LONZO, a citizen of the United States, residing at Fitchburg, in the county of Worcester and State of Massachusetts, have invented a new and useful Smash-Preventer for Looms, of which the following is a specification.

This invention relates to a smash preventer for looms.

The principal objects of the invention are to provide a simple smash preventer having no moving parts thus requiring no oiling and no attention on the part of the operatives and also having no parts liable to wear out in use.

With this end in view the invention involves the use of a stationary member mounted on the lay itself and extending up behind the shuttle binders and adapted to engage the one for the cell of the shuttle box which is in position to discharge a shuttle into the shed or receive it therefrom and to hold that shuttle binder and consequently the shuttle box until the shuttle has been returned to that cell.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a front elevation of a portion of a loom showing how the invention can be applied thereto. Fig. 2 is a plan of the same. Fig. 3 is a front elevation of a portion of the same on enlarged scale. Fig. 4 is a plan of the bracket on the lay for holding the binder lock, and Fig. 5 is a front view of the bracket and binder rod.

The lay 10 is shown as provided with a well known form of movable shuttle box 11 having cells for a plurality of shuttles. Each shuttle has a binder 12 which is pressed by a spring 13 against the shuttle and consequently moves inwardly when the shuttle is discharged. Mounted in a stationary position on the lay is a rod 14 having a pair of stops or hooks 15 thereon. These stops are arranged just above and below the path of the shuttle as it moves out in a proper manner into the shed so that the shuttle which is to operate will always be in such position that when it leaves the box its spring 13 will force the outwardly curved end of that binder 12 inwardly between the two stops 15. This will prevent the box from moving up or down until the shuttle

comes back into the right cell. When the shuttle does come back, it engages the binder and forces it out to the position shown in full lines in Fig. 2.

The rod 14 is shown as mounted on a bracket 16 which is fixed to the leg of the lay and moves back and forth therewith. This bracket extends outwardly from the end of the lay so that the rod 14 is situated at a distance beyond said end.

In operation after a shuttle has left the box the binder for the cell which has discharged the shuttle comes between the two stops or hooks 15 and consequently the box cannot move up or down. If the shuttle does not come back, this situation continues and the box is kept in position for the proper cell to receive its shuttle. The shuttle box rod 20 is provided with the usual giveaways (not illustrated) so that when the loom is going to make a smash the box motion for shifting the boxes up and down will give away as is usual. If anything breaks in the single end side and fails to throw the shuttle across to the box side, or if the weaver puts his shuttle into the single end side by mistake, this device will prevent the box from shifting so the two shuttles cannot meet in the shed to make a smash.

It will be seen that this is an exceedingly simple and convenient construction involving no moving parts and therefore requiring no oiling and having no wear.

While I have illustrated and described a preferred form of the invention, I am aware that many modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to all the details of constructions shown and described, but

What I do claim is:—

1. In a shuttle box mechanism for looms, the combination with the lay and a vertically movable shuttle box and shuttle binder, of means immovably mounted on the lay and coöperating with one of the shuttle binders when a shuttle has been discharged for preventing the shuttle box from moving when the cell thereof that last discharged a shuttle into the shed is empty.

2. In a shuttle box mechanism for looms, the combination with the lay and a vertically movable shuttle box having cells, of a

rod fixed on the lay having stationary means thereon for engaging the binder of any cell in position to receive a shuttle from the shed to prevent the shuttle box from moving up and down.

3. In a loom, the combination with the lay and a vertically movable shuttle box having cells for a plurality of shuttles, and having a binder for each shuttle adapted to be forced outwardly when the shuttle is in position, of a member fixed on the lay and provided with two stops or locks located in position to engage the top and bottom respectively of the shuttle binder for that cell which is in position for discharging the shuttle into the shed to prevent motion of the shuttle box until the shuttle returns to that cell.

4. In a loom, the combination with the lay, a movable shuttle box and a shuttle binder, of means on the lay for engaging the shuttle binder and preventing the shuttle

box from moving before a shuttle has been returned to the last cell that discharged a shuttle into the shed, said means comprising a bracket fixed on the lay, and a stationary rod having stops for the binder mounted fixedly thereon.

5. In a loom, the combination with a shifting shuttle box having a series of cells, and a series of binders, one binder for each cell, of a lock for the shuttle box mounted immovably on the lay, and consisting of a single integral piece of metal having means for engaging the shuttle binders to lock them.

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

WILLIAM LONZO.

Witnesses:

DAVID LOWE,  
ROBERT NEIL.