H. CÔTÉ & R. C. SNOW.

REED FOR LOOMS.

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Fig. 1.

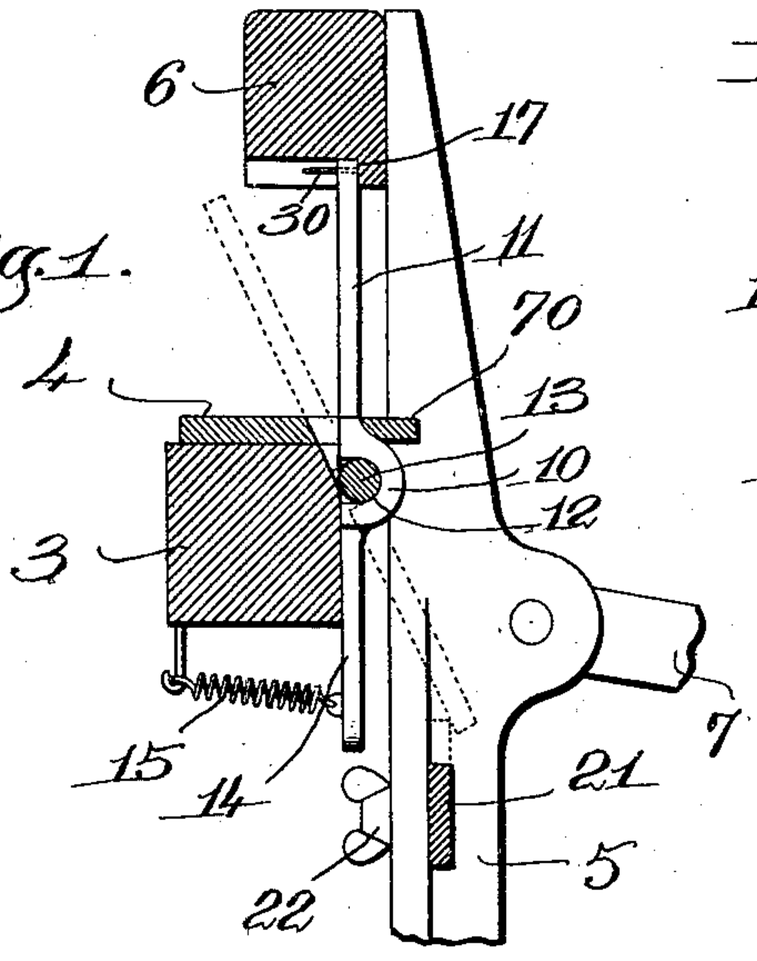

Fig. 3.

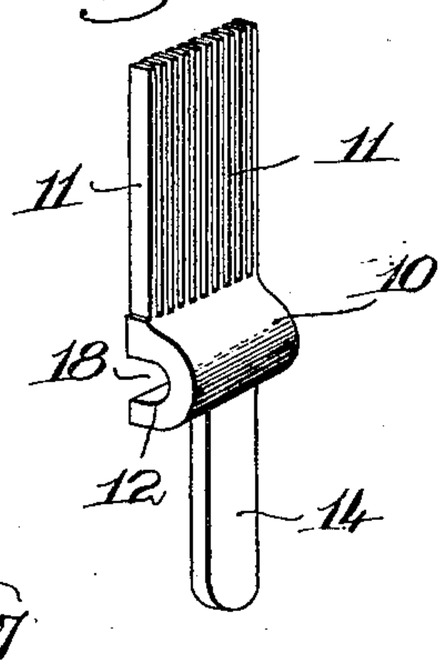

Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

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REED FOR LOOMS.

No. 915,335. Specification of Letters Patent. Patented March 16, 1909.

Application filed May 19, 1908. Serial No. 433,674.

To all whom it may concern:

Be it known that we, HENRY CÔTÉ and RENCELER C. SNOW, citizens of the United States, and residents of West Warren, Massachusetts, and Ware, Massachusetts, respectively, have invented an Improvement in Reeds for Looms, of which the following description, in connection with the accompanying drawing, is a specification, like numerals on the drawing representing like parts.

This invention has for its object to provide a novel reed for looms which is constructed to greatly facilitate the threading of the warp threads between the dents of the reed. It is now the common practice in constructing reeds for looms to secure the dents together at both the top and bottom, and as a result the drawing of the warp threads into the loom involves the drawing of each separate thread between the proper dents by hand and by means of a hook or other implement. This is a slow and tedious operation.

In our invention we have provided a novel form of reed wherein the dents of the reed are disconnected from each other at one end and are so arranged that by proper manipulation the exposed ends of the dents can be thrown into a position so that the warp threads may be readily dropped into the spaces between the dents.

In the preferred embodiment of our invention the dents of the reed are so supported that the upper ends thereof may be swung away from the hand rail a sufficient distance to permit the separated upper ends of the dents to be exposed for the dropping of the warp threads thereinto, although this particular manner of securing the objects of the invention is not essential thereto.

In the drawings wherein we have shown the preferred embodiment of our invention, Figure 1 is a vertical sectional view through the lay and the reed of a loom showing one way in which our invention may be applied thereto; Fig. 2 is a front view of the reed; Fig. 3 is a detail perspective view of a portion of the reed.

The parts which are old and form no part of our invention are the lay 3 on which is the shuttle race 4, the lay-swords 5, the hand rail 6 which extends across the lay above the latter and which is secured to the upper ends of the lay-swords, and the connecting rod 7 by which the lay is given its swinging movement. These parts may have any suitable or usual construction.

The preferred way of applying our invention to a loom is making the reed so that the upper end thereof can be swung away from the hand rail so that the warp threads may be readily dropped into the spaces between the dents. We prefer to secure this end by pivotally mounting the reed on the lay, and while this could be done in a great variety of ways, one of which would be by pivoting each dent separately, yet we prefer to make the reed in sections, each section of which includes a plurality of dents, so that by swinging any section about its pivot, all the dents carried thereby may be swung away from the reed. One convenient way of thus making the reed is to make a plurality of reed sections, such as shown in Fig. 3, each having the bearing portion or hub 10 from which extends the dents 11, said dents being separated from each other at their upper ends. The hub is provided with a bearing 12 which fits a rod 13 or other support carried by the lay whereby each section may turn on this rod or support from the full line position Fig. 1 into the dotted line position. Each section is preferably extended below the hub, as shown at 14, and said extended part is acted on by a suitable spring 15 or similar means which tends to hold the sections in their proper vertical operative position, as shown in full lines Fig. 1.

The hand rail is shown as provided with the shoulder 17 against which the upper ends of the dents rest, said shoulder forming a stop to limit the backward movement of the reed sections. For convenience we may make the hub 10 with the open side 18 so that each section can be applied laterally to the rod or support 13, and when this construction is employed we propose to place a rod or bar 70 across the lay immediately behind the reed to prevent the reed sections from being forced off from the support 13 when the lay in beating up strikes the fell of the cloth. In making the reed sections in this way a piece of metal is formed into the proper shape and then the dents are formed therein either by sawing or otherwise slitting the upper portion of the piece of metal from the upper edge down to the hub in which case the dents are integral with the hub, or by making the dents separate from the hub and sol-

dering or otherwise securing them thereto. These sections may be of any length desired and an appropriate number of them may be used to reach across the lay. In order to keep them in their proper position adjacent each other, the rod or support 13 may be provided with adjustable positioning collars 20.

We also prefer to provide a suitable device for positively holding the reed sections in their dotted line position Fig. 1 when it is desired to insert a warp thread therein. This may be accomplished simply by securing to the lay-swords 5 a cross bar 21 which is adapted to be elevated into the dotted line position Fig. 1 after the reed section or sections are swung into their dotted line position, in which position the tails or extended portions 14 of the reed sections engage the elevated stop or bar 21 and are held thereby in their dotted line position. This bar 21 is shown as having clamping screws 22 secured thereto which operate in slots 23 formed in the lay-swords, said slots permitting the necessary vertical adjustment of the bar 21.

In threading up the loom it is simply necessary to press the reed sections forward into the dotted line position and then elevate the stop bar 21 which operates to hold them in such elevated position. The warp threads may then be passed in under the hand rail and each thread dropped into the proper space between the dents from the open top of said space. This can be done rapidly and without the use of any special implement. When the threads have all been properly placed in the reed, the bar 21 may be lowered when the springs 15 will return all of the reed sections to their normal position, as shown in full lines.

We will preferably provide the hand rail with spacing or positioning members 30 which are received between the dents of the reed when the reed sections are in their normal position. These positioning members may conveniently be in the form of pins extending from the hand rail, as such a construction will permit the reed sections to be freely swung into the dotted line position, but will operate to hold the upper ends of the dents in their proper position longitudinally of the reed when the reed sections are in the full line position Fig. 1.

It is not essential to our invention that the particular form of spring mechanism herein shown be employed to hold the reed sections in their proper normal position; nor is it essential that the reed should be made in sections as herein shown. We believe we are the first to provide a reed for a loom in which the dents are capable of moving relative to the hand rail or the lay so that the threads may be dropped into the open spaces between the ends of the dents, and we desire, therefore, to claim this feature broadly regardless of the particular manner in which the end is accomplished. We prefer, however, to make the reed in sections as herein shown because if any warp thread breaks, the broken thread can be readily threaded into the reed by swinging the appropriate reed section into the dotted line position Fig. 1, and then placing the repaired warp thread in the proper space.

Another advantage of making the reed in sections is that if the dent or dents or any section become injured or bent, such section may be readily taken out and a new section inserted. The bar 70 is preferably supported so that it can be readily withdrawn whenever it is desired to remove any reed section.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a loom, the combination with a lay, of a reed sustained thereby, said reed having dents disconnected from each other at one end and mounted movably relative to the lay whereby the dents may be shifted to present open spaces between them into which the warp threads may be placed.

2. In a loom, the combination with a movable lay and a hand rail, of a reed sustained by the lay and movable therewith, said reed comprising a plurality of dents disconnected from each other at one end and pivotally mounted on the lay so as to be capable of movement relative to the hand rail whereby they may be swung into position to present open spaces between them into which the warp threads may be placed.

3. In a loom, the combination with a lay, of a sectional reed sustained thereby, each section presenting a plurality of dents separated at one end and movably mounted whereby the free ends of the dents may be moved away from the other parts of the structure to permit the warp threads to be inserted between said free ends.

4. In a loom, the combination with a lay and a hand rail, of a sectional reed comprising a plurality of independently movable sections, each presenting a plurality of dents separated at the upper end, and means acting on each section to normally hold the upper end of the dents against the hand rail.

5. In a loom, the combination with a lay, of a sectional reed, the sections of which are independently pivoted to the lay, each reed section presenting a plurality of dents separated from each other at their upper ends, and means acting on each section to hold the upper end thereof in operative position.

6. In a loom, the combination with a lay, of dents separated from each other at one end and mounted movably relative to the lay whereby the dents may be shifted to present open spaces between them into which the warp threads may be placed, and means

separate from the dents to position them longitudinally of the lay when they are in their operative position.

7. In a loom, the combination with a lay and a hand rail, of dents pivoted to the lay so that their upper ends may swing toward and from the hand rail, and positioning devices carried by the hand rail for positioning the dents longitudinally of the loom.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

HENRY CÔTÉ,
RENCELER C. SNOW.

Witnesses:
HENRY C. DAVIS,
MAY DAVIS.