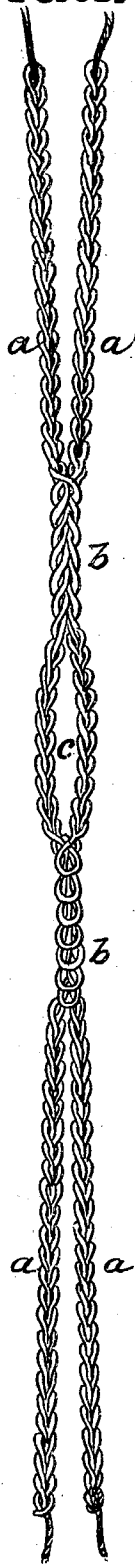


E. G. Jelley.
Weaving Heddle.

Nº 90,364.

Patented May 25, 1869.



Witnesses.
Geo. A. Long
Edward Griffith.

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EDWIN GEORGE JELLEY, OF PAWTUCKET, RHODE ISLAND.

Letters Patent No. 90,364, dated May 25, 1869.

IMPROVEMENT IN HEDDLES FOR LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, EDWIN GEORGE JELLEY, of Pawtucket, in the county of Providence, and State of Rhode Island, have made an invention of a new and useful, or improved Manufacture of Heddles for Loom-Harness; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawing, making part of this specification, and which is a view of a heddle, as made in accordance with my invention.

This invention relates to improvements in that class of heddles for loom-harness, composed of fibrous material, whereby the friction, or abrasion upon the threads of the warp is lessened, and an elasticity of the heddle obtained, highly favorable for enabling it to accommodate itself to threads of different sizes and weights, as hereinafter explained.

As heretofore made, heddles for loom-harness of the above class, have been usually composed of a twisted cord, and the eyes formed therein by tying the two cords together in knots, one at each end of the eye.

Heddles have also been made of strands of unspun yarn, twisted so as to form the eye without knotting, as shown in Letters Patent to Kasimir Vogel, dated December 10, 1846.

In practice, it has been found that the knots cause more or less abrasion of the threads of the warp, as they pass by them in being raised and lowered.

It has also been found that the heddle, when formed of unspun yarn, twisted and not knotted, as last above mentioned, is not elastic to any appreciable extent, and is, moreover, liable to twist and turn the eye and thread out of place; and, moreover, the proper manufacture of such heddles requires a special machine for the purpose, in which but one at a time is twisted.

To obviate these and other objections, I make the heddles of braid, and form it of a crochet, or loop-stitch, which does away with the necessity for knotting, renders the heddle elastic, and removes all liability of twisting and turning the parts out of place; and as they can be made in a continuous string, and in a knitting-machine used for other purposes, which can crochet five hundred or more of the heddles at one time, if necessary, they can be produced not only much better, but also much cheaper than has heretofore been practicable.

In the drawing, above mentioned as accompanying this specification, a heddle is shown as composed of two cords, or strands, *a a*, composed of any suitable

fibrous material, formed of a series of loop, or crochet-stitches, which form of stitch enables the union of the two cords to be readily accomplished, and is, to a considerable extent, elastic.

In carrying out my invention, I employ a machine suitably constructed for the purpose, and so operating, when knitting the two cords, as to intervene or interlace the stitches of such cords at two points, at various given distances in the entire length of the cords, such cords being subsequently sundered at points intermediate between each series of interlacings, by this means producing sections of a proper length for a heddle, as will be readily understood by persons conversant with the craft to which my invention appertains.

The drawing shows one heddle, the cords *a a* of which are interwoven or interlaced at two points, as shown at *b b*, by this means forming a short enclosure, *c*, between such points of intersection, of a proper length for the eye of the heddle.

It will be seen that the mode of joining the two cords to form the eye of the heddle, as above explained, tends to reduce the bulk of the two cords, rather than to produce a considerable enlargement of such bulk, as in the case of a knot; consequently, the eye of the heddle will pass and repass the thread of the warp next adjacent to it, without being caught upon, or abrading such cord—an advantage which will be readily appreciated by weavers.

In addition to this advantage, the character of the article, of which the cords *a a* are composed, renders such cords, to a considerable degree, elastic, and enables them to accommodate themselves to the varying strain consequent upon the use of threads of different sizes.

Having now described my invention, and the manner in which the same is or may be carried into effect, I would state that I do not claim, broadly, joining the strands of a fibrous heddle so as to form the eye without increasing the bulk of the heddle at the point of junction of the strands; but

What I do claim, and desire to secure by Letters Patent, is—

A knitted heddle, made in the manner and for the purposes shown and specified.

EDWIN GEORGE JELLEY.

Witnesses:

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