

J. DYSON.

Improvement in Heddle-Frames.

No. 129,722.

Patented July 23, 1872.

Fig. 1.

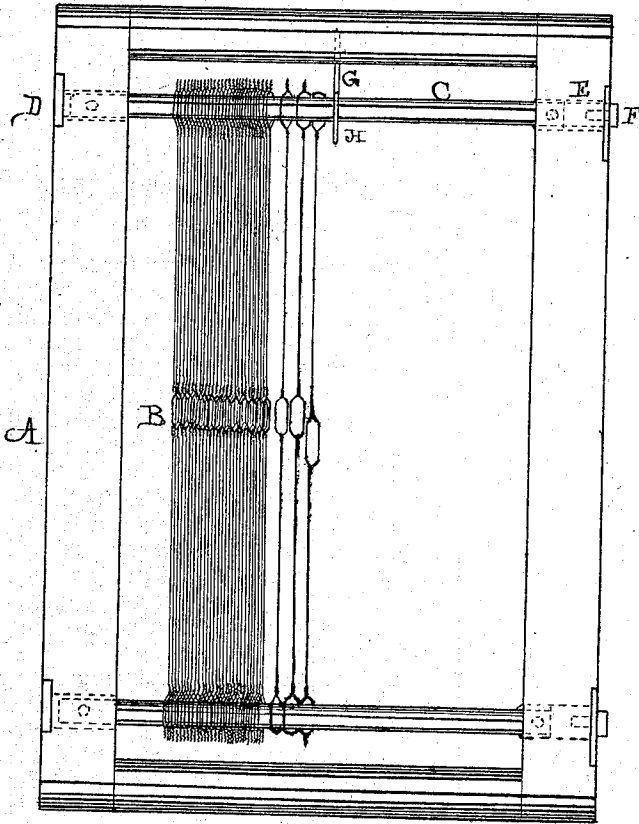


Fig. 2.

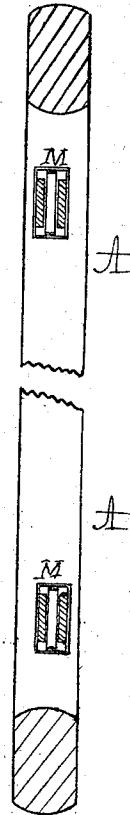


Fig. 3.

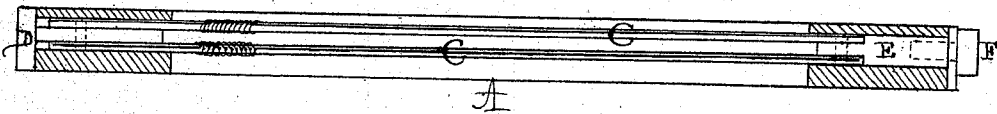
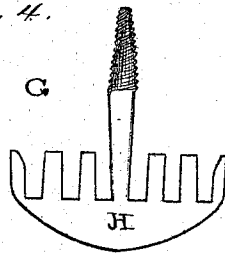


Fig. 4.



Witnesses:  
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Inventor:  
*John Dyson*  
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# UNITED STATES PATENT OFFICE.

JOHN DYSON, DECEASED, OF PHILADELPHIA, PENNSYLVANIA; ELIZABETH  
DYSON, ADMINISTRATRIX.

## IMPROVEMENT IN HEDDLE-FRAMES.

Specification forming part of Letters Patent No. 129,722, dated July 23, 1872.

*To all whom it may concern:*

Be it known that I, JOHN DYSON, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Heddle-Frames; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and make and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a front view. Fig. 2 is a vertical section in line *x x*, Fig. 1. Fig. 3 is a horizontal section in line *y y*, Fig. 1. Fig. 4 is a detached view.

This invention consists in the arrangement of the rods on the heddle-frame to protect the locked ends of the heddles. It also consists in mechanism for securing the rods to the frames.

Referring to the drawing, A represents the heddle-frame, and B the heddles. These heddles are arranged in series, one behind the other, and each series is hung on separate rods C, which are arranged parallel to each other, with an upper and lower rod for each series, which rods are secured to the heddle-frame. In cases where a great number of heddles are necessary they may be made to occupy but a small space and yet operate the same as if spread out or occupying much room, and the heddles may be arranged near the work. In practice it is well that the eyes of one series are not in line with those of the adjacent series, but a little above or below, so that the threads passing through the eyes will not interfere with each other.

In one series of the heddles the locked ends thereof will be on one of the upper rods, and those of the next series on one of the lower rods, so that the locked and bent ends of the heddles, respectively, alternate on the upper and lower rods. In operation the locked ends are liable to be caught and either fractured or destroyed, thus endangering the heddles and threads.

In order to avoid this I arrange the openings for the rods, which are at one end of the frame, at a point near the rear face of the

frame, and the openings for the rods at the other end near the front face of the frame, so that the upper and lower openings are arranged diagonally, or in other words not in line with each other, as shown in Fig. 2.

The locked ends of the heddles will be hung on those rods which are furthest away from the relative faces of the heddle-frame, while the bent or eye end of the heddles will be nearest to the respective faces of the heddle-frame, so that the twists which form the locks of the heddles will be brought to the center of the frame, and consequently do not project, and are not liable to be caught, whereby fracture and destruction of the heddles are prevented.

The usual mode of securing the rods is to pass pins through the frame and the rods. The pins thus are liable to be struck and caught during the operation of the frames or interfere with their movements. This often throws out the pins, releases the rods, and causes the heddles to be disengaged from the rods. In order to avoid this I attach to one end of the rods a headed or flanged plate, D, and to the other end a plate, E, into which enters a screw or bolt, F. The head or flange of the plate E will bear against a side of the frame. The body of the plate enters a transverse opening in the said side, and is attached to the rods by means of studs or pins, which drop into openings in the rods, so that parts are held together and present no obstructions to the free entrance of the rods into and their exit from the frame. The plate E is secured to the other end of the rods in a manner similar to the body of plate D, and is formed with an opening, into which enters the screw or bolt F, the head of which bears against the frame or a washer laid thereon, so that the rods may be drawn up and held firmly in the frame, and present no projections to interfere with the other heddle-frames in operation. In order to support the centers of the rods I attach to the top and bottom of the frame studs G, which consist of screw-shanks, which enter the frame and carry forked heads H.

When the rods are to be applied to the frame they are passed through one side thereof, slipped between the forks, and then through

the other side of the frame, where they are secured, and, resting on the heads and embraced thereby, are firmly held in position.

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

1. The heddle-frame, provided with slots M M for the insertion of the rods C C, when said slots M are situated diagonally with each other, as and for the purpose described.

2. The flanged plate D, pivoted between the

rods C C and supporting them, in combination with the shouldered plate E, pivoted between the opposite ends of the rods C C and supporting them, screw-bolt F, and heddle-frame A, substantially as described.

The above signed by me this 14th day of March, 1872.

JOHN DYSON.

Witnesses:

JOHN A. WIEDERSHEIM,  
ALFRED C. SAVIDGE.