D. C. BROWN.

Screw Heddle-Eye or Hook for Heddle-Frame.

No. 204,881. Patented June 18, 1878.

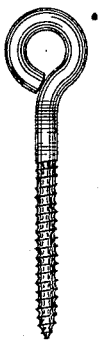

FIG. 2.

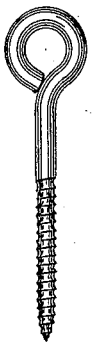

FIG. 1.

FIG. 3.

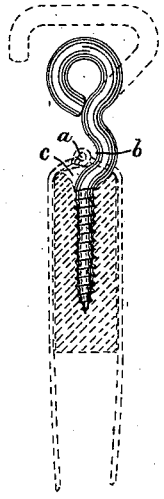

FIG. 4.

FIG. 5.

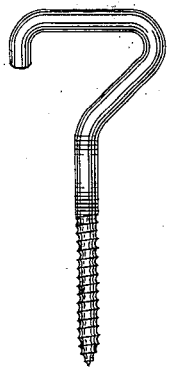

FIG. 6.

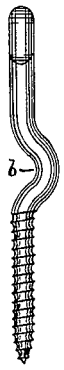

FIG. 7.

WITNESSES:

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UNITED STATES PATENT OFFICE.

DARIUS C. BROWN, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN SCREW HEDDLE EYES OR HOOKS FOR HEDDLE-FRAMES.

Specification forming part of Letters Patent No. **204,881**, dated June 18, 1878; application filed March 30, 1877.

To all whom it may concern:

Be it known that I, DARIUS C. BROWN, of Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improved Screw Heddle Eye or Hook for Mounting Heddles of Looms, of which the following is a specification:

This improvement relates to the manner of constructing the eyes or hooks which are inserted in the upper and lower shafts of the several leaves of heddles, to which eyes or hooks the cords or straps are attached by which each leaf is suspended and worked. Each of these screw-eyes is usually attached to the upper or lower shaft of the heddle in the middle of its thickness by screwing the metallic shank of the eye or hook into the wooden shaft in the plane of the heddle-leaf, with the eye or hook of the same projecting above and below the leaf to which the cords or straps are attached.

In making the heddles of twine, each strand or twine of the heddle is attached at both the top and bottom of the leaf to a small cord called the "rig-band," either by knitting or knotting, which rig-band is placed at the middle of the thickness of each shaft, and extends the whole length of each leaf from end to end. Now, as this rig-band occupies the middle position on both the top and bottom of the leaf, the insertion of the screw eyes or hooks into the shaft, as shown, pushes the rig-band to one side of a central position in the leaf, which raises or depresses the eyes or mails, which are connected with those twines or cords, so that they are not in line with the other eyes or mails in that leaf, which seriously interferes with the proper action of the heddles in weaving, and causes those eyes or mails thus disturbed or moved out of their proper position to receive unnecessary strain or wear, which causes them to be prematurely worn out or broken.

To avoid this result is the purpose of this invention, which consists in making the shanks of the screw eyes or hooks, at or near the point where they enter the top or bottom surfaces of the shaft of the heddle-leaves, with a recess or offset, which will permit the rig-band to occupy a central position on the shaft, while the eyes or hooks also occupy a central position to the leaves, and thus entirely obviate the defect before named, and yet be as convenient as the screw-eyes and hooks before in use.

In the drawings, Figure 1 is a view of the screw-eyes in ordinary use. Figs. 2 and 3 are two views of the improved screw-eyes, with the offset for the rig-band at right angles to the plane of the eye. Figs. 4 and 5 are two views of the improved screw-eye, with the plane of the eye at a right angle to that of the eyes shown in Figs. 2 and 3, and in Fig. 4 the screw-eye is shown as inserted in the heddle-shaft in position for use. The dotted lines in this figure show a screw-hook inserted in the same place, excepting that the plane of the hook would generally be parallel to the plane of the leaf of heddles instead of transverse to it. Figs. 6 and 7 show hooks that are to be used instead of eyes when it is desired to mount the heddles with straps instead of cords.

The hooks and eyes are made of wire in the usual way, and provided with screwed shanks to screw into wood, as is shown in the drawings, by which they are secured to the heddle-shaft, as seen in Fig. 4, and at the point at which the shank crosses the rig-band *a* it is provided with a recess or offset, *b*, which permits the rig-band to retain its central position on the heddle-shaft, as is shown.

As the hook or eye is inserted into the heddle-shaft by screwing it into place, the plane of the eye or hook may be placed either parallel with the plane of the leaf or at a right angle to this; and, in order that the shank may not displace the rig-band, it may be well to make a small recess or countersink, *c*, in the shaft, to enable the offset or recess *b* to come beneath the rig-band, as seen in Fig. 4.

What I claim as my invention is—

1. The improved hook or eye made with a screw-shank and an offset or recess in the shank to receive the rig-band, and adapted to operate substantially as described.

2. The improved hook or eye made with a screw-shank and with an offset or recess in the shank to receive the rig-band, as described, in combination with the shaft of a leaf of heddles, substantially as described.

Executed March 27, 1877.

DARIUS C. BROWN.

Witnesses:

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WM. C. HIBBARD.