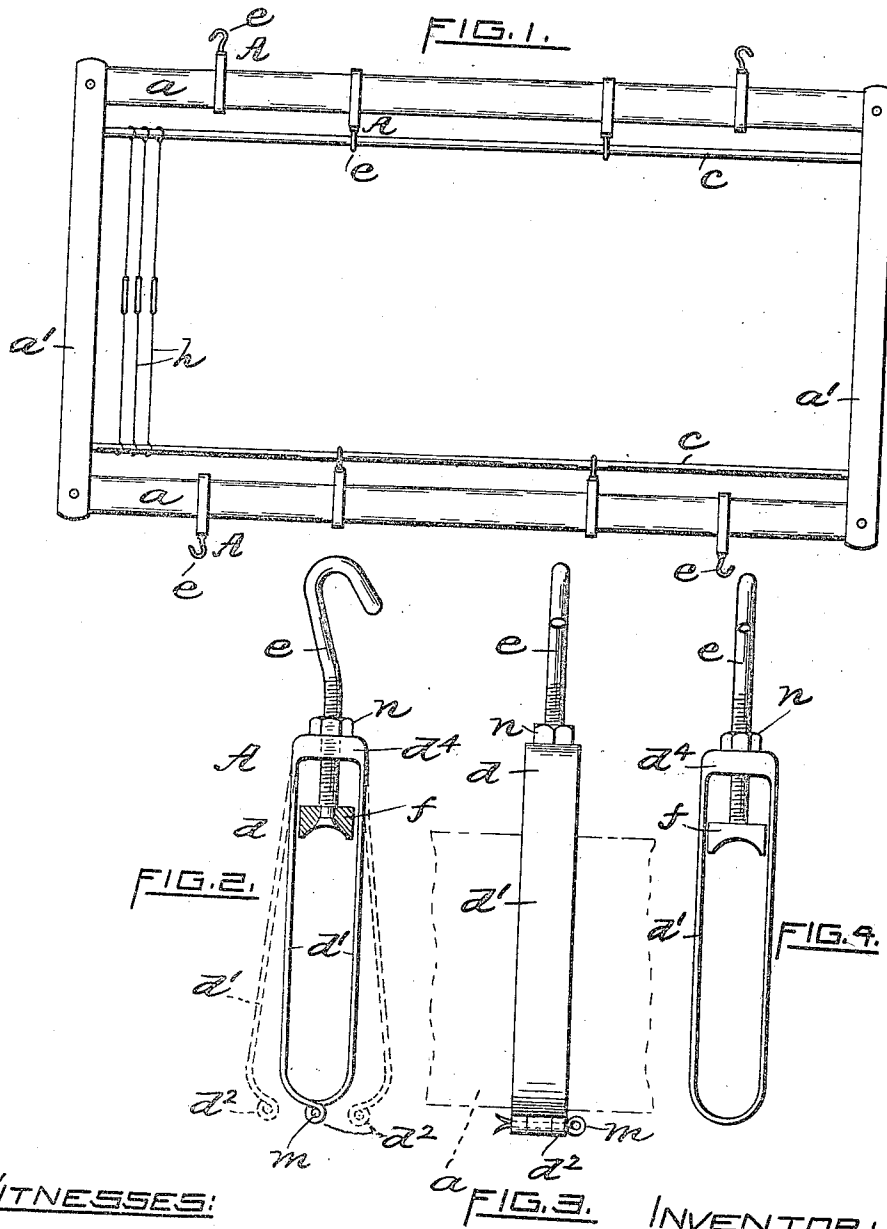


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 HOOK ATTACHMENT FOR HARNESS AND HEDDLE FRAMES.
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961,463.

Patented June 14, 1910.



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UNITED STATES PATENT OFFICE.

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HOOK ATTACHMENT FOR HARNESS AND HEDDLE-FRAMES.

961,463.

Specification of Letters Patent. Patented June 14, 1910.

Application filed August 30, 1909. Serial No. 515,135.

To all whom it may concern:

Be it known that I, LOUIS ROBIDOUX, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Hook Attachments for Harness and Heddle-Frames, of which the following is a specification.

My invention relates to improvements in hook attachments for harness and heddle-frames for looms, and it consists in certain novel features of construction and adaptability, all as more fully hereinafter set forth and claimed.

In heddle-frames of the character referred to and as usually devised the harness-hooks, so-called, attached to the harness-straps, are screwed directly into the outer edges of the horizontal wooden bar members or "shafts" of the heddle-carrying frames. It may be stated that usually in a mill for producing woolen and worsted goods, the harnesses are interchangeable or capable of use in looms built by different manufacturers. In order to adapt the harnesses to the various looms the location of the harness-hooks are necessarily changed. In such event the harness-hooks are unscrewed from the frame, then repositioned and secured in place by screwing them into newly formed holes. An objection to such former practice, aside from the extra time and labor involved in making the changes, is that the frame becomes greatly weakened or split after awhile owing to the great number of holes formed in the bars and also to the rapid intermittent pulling action upon the leather straps attached to the hooks. Moreover, the hooks themselves fail to hold properly, thus necessitating the substitution of new frames. The foregoing objections apply to the hooks when they are employed for holding the cross rods on which the heddles are slidably supported; the hooks in such case being screwed into the opposite or inner edges of the said horizontal bar members.

The primary object sought to be attained by the invention forming the subject of the present application for patent is to provide the harness and heddle-frames of looms with a simple and comparatively inexpensive device adapted to be easily and quickly removably secured to and at the same time be-

ing capable of slidable movement upon the bars or shafts of the frame, and being further adapted to be clamped thereon in any desired position.

In the accompanying sheet of drawings, Figure 1 represents the heddle-carrying frame of a loom harness provided with my improved harness-hook attached, most of the heddles being omitted. Fig. 2 is a front elevation of the device in enlarged scale and partial section, showing my improved combined hook and strap or loop member detached from the frame or shaft. Fig. 3 is a corresponding side view, and Fig. 4 is a view, corresponding with Fig. 2, showing the hook combined with a non-separable or closed strap member.

In carrying out my invention, or harness-hook attachment A, I employ a thin, narrow band of metal bent or shaped to form an elongated loop member *d* adapted to freely receive and encircle the shaft *a* transversely. The shank of the hook *e* is screw-threaded and screwed into an end *d'* of the loop member. The inner end of the shank is revolutely fitted in a guided vertically movable block *f* adapted when in use to engage the adjacent edge of the said shaft or bar and be clamped thereto by the hook member itself. The said strap member *d*, in its preferable form, has its upper end thickened and tapped to receive the correspondingly threaded shank of the hook; the two sides or legs *d'* of the strap extend downward and parallel with each other, and are adapted to be secured or locked together at the lower end in any suitable way. As drawn, the stock at the terminal end of the legs is fashioned to form small closed eyes *d''*, similar to a hinge-joint, adapted to receive therein a cotter-pin *m*. The wire hook *e* is screwed into the strap member, its lower end having a non-revoluble slidable block *f* mounted thereon; the screw itself being revoluble in the block. A check or lock-nut *n* is employed for obvious purposes.

In applying my improved harness-hook attachment A to the main bar or shaft members *a* of harness and heddle-frames the cotter-pin *m* is first withdrawn and the side members *d'* of the strap sprung apart laterally (see dotted line position indicated in Fig. 2) to freely receive the shaft edgewise therein, after which they are moved back to the normal position and the pin reinserted,

thus firmly connecting the two sides together. The device is next moved longitudinally along the shaft to the desired point or place, and the hook screwed inwardly or downward until its block member *f* snugly bears upon the adjacent edge of the shaft, followed by re-securing the nut *n* against the end of the strap, thus rigidly holding the device in position against accidental movement in any direction.

The device is equally well adapted to be used, in connection with the shafts *a*, for holding the cross rods *c* on which the usual wire heddles *h* are slidably supported. Said rods are secured in the end members *a'* of the frame as usual.

By means of my improvement the hooks *e* may be easily, rapidly and accurately positioned on the shafts *a* and without separating or dismantling the harness-frame, thereby greatly expediting and facilitating the operation of changing or shifting the hooks along the shafts.

The device in a modified form, represented in Fig. 4, possesses the function and advantages embodied in the construction shown in Fig. 2 except that of separableness.

I am aware that prior to my invention laterally movable hooks for heddle-frames have been employed, but such former hooks

or devices were unprovided with means for removably attaching them to the shafts of the frame when the latter is in the normal or non-separated state, nor were they provided with means whereby the hooks could be secured in place after adjustment.

I claim as my invention and desire to secure by United States Letters Patent:—

The herein described harness-hook connection for heddle-frames, the same consisting of a metal strap or slip having a tapped head part and a pair of laterally separated parallel side members, *a'*, integral therewith, each terminating at its free end in an eye or loop, a pin removably mounted in said eye portions for locking the side members together, a wire hook, *e*, having its shank fitting the said tapped head part of the strap, a non-revoluble block disposed between the said side members having the inner end of the hook's shank swivel-mounted therein, and a check-nut arranged to cooperate with the said head and shank so as to maintain the hook in adjusted position.

In testimony whereof I have affixed my signature, in presence of two witnesses.

LOUIS ROBIDOUX.

Witnesses:

GEO. H. REMINGTON,
ALBERT J. BERARD.