

No. 762,434.

PATENTED JUNE 14, 1904.

C. E. NUTTING.
CLAMPING DEVICE FOR HEDDLE BARS OR SUPPORTS.

APPLICATION FILED APR. 14, 1904.

NO MODEL.

Fig. 1.

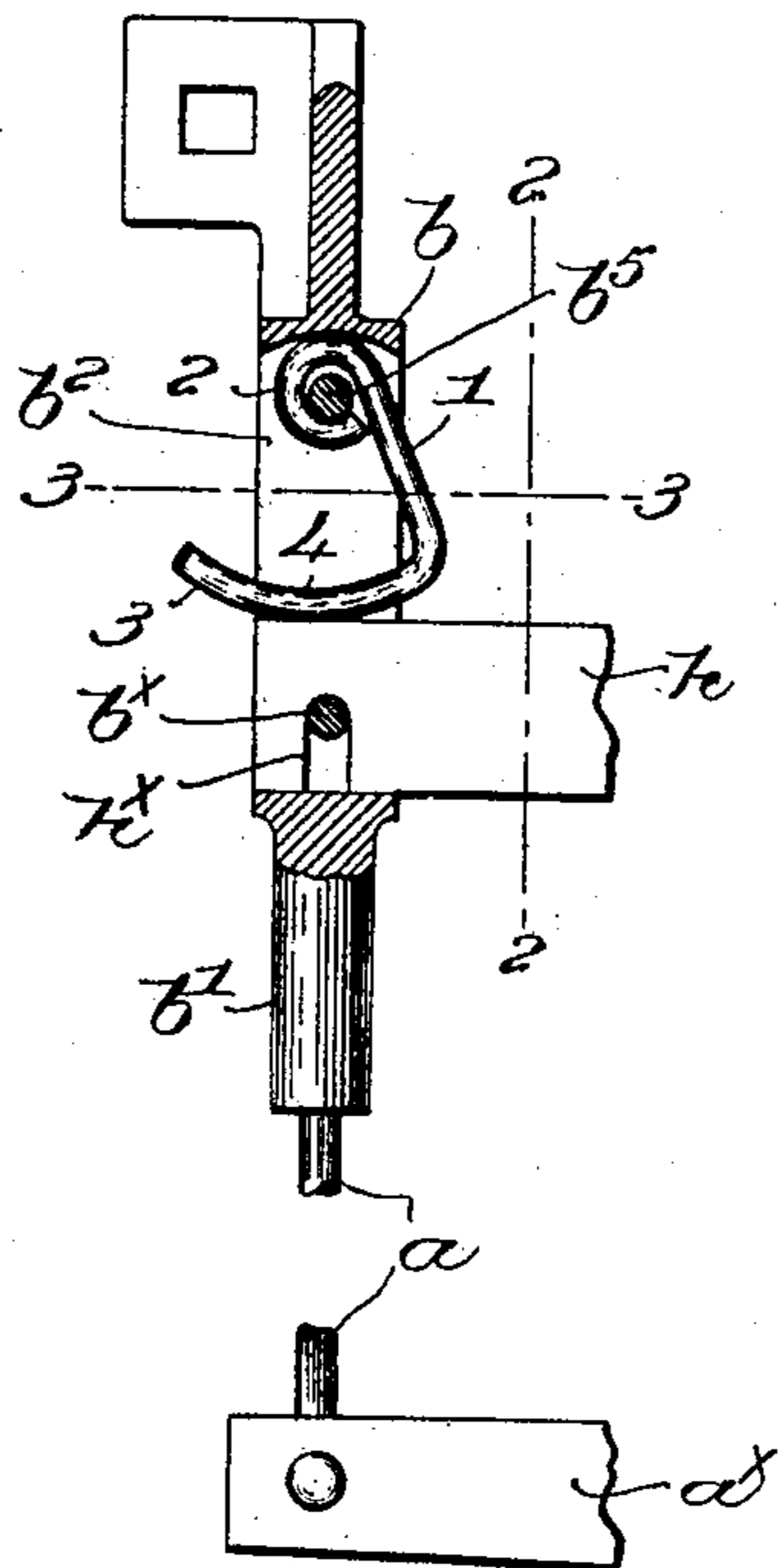


Fig. 2.

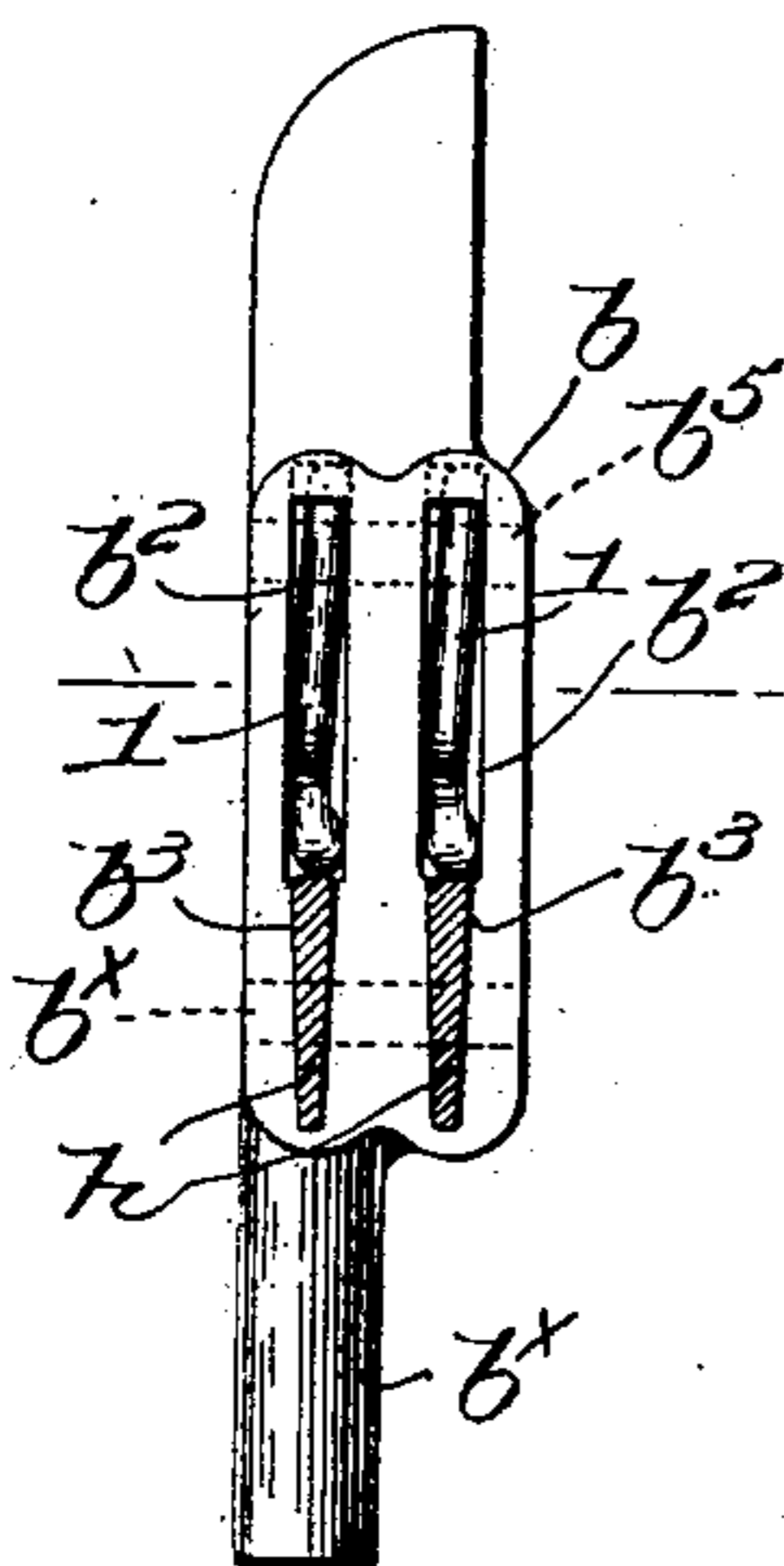


Fig. 3.

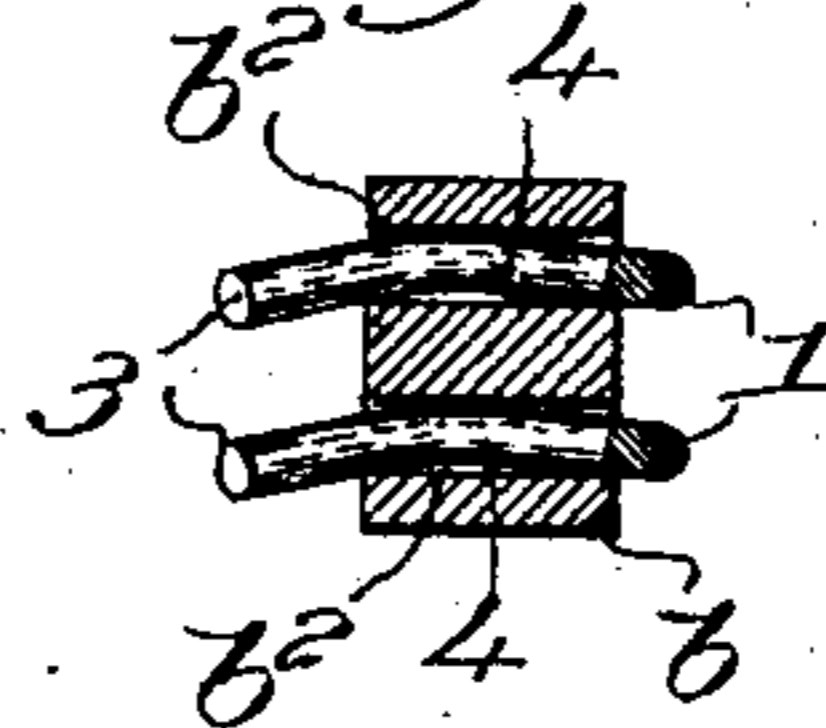


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CLAMPING DEVICE FOR HEDDLE BARS OR SUPPORTS.

SPECIFICATION forming part of Letters Patent No. 762,434, dated June 14, 1904.

Application filed April 14, 1904. Serial No. 203,100. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. NUTTING, a citizen of the United States, and a resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Clamping Devices for Heddle Bars or Supports, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of simple and effective means to clamp or lock in place the heddle bar or support in a loom-harness frame of the type wherein the heddles, usually made as flat thin metallic plates, generally serve also as warp-stop-motion-controlling detectors. A device of this general character forms the subject-matter of United States Patent No. 729,047, wherein the heddle-bar is retained seated in the heads of the harness-frame by locking-cams, made of strong spring-wire. These cams are pivoted in slots in the heads and when pushed into the slots bear on the top of the heddle-bar and maintain it seated, and the resiliency of the cams also is depended upon to prevent their accidental release. In actual practice there is at times some tendency of the locking-cams to be gradually moved into releasing position by the incessant vibration of the shedding mechanism, and my present invention provides additional means to prevent such accidental release without increasing the number of parts or the weight of the apparatus and which has proved thoroughly practical and satisfactory in use.

Figure 1 is a front elevation and partial section of one side of a harness-frame embodying one form of my invention, the side bar being broken out between its ends. Fig. 2 is an inner side view of the head, the heddle-bars being in section on the line 2 2, Fig. 1. Fig. 3 is a horizontal section on the line 3 3, Fig. 1, looking down; and Fig. 4 is a top or plan view of one of the locking-cams detached.

In Fig. 1 I have shown a portion of the bottom cross-bar a^x of the harness-frame and one

of the upright side bars a rigidly attached thereto, the upper end of the rod being threaded to enter the depending boss b' of a head b , made as a casting, all substantially as in the patent referred to, except that herein the head has two longitudinal slots b^2 extended there-through instead of one, as in said patent. The walls of each slot converge at the lower end to form a seat b^3 , Fig. 2, for one of the heddle-bars h , the latter being notched at h^x to embrace a transverse pin b^x , crossing the two seats, to retain the bars from longitudinal movement relative to the heads, as will be understood. A locking member is provided for each bar, herein shown as a piece of strong spring-wire 1, having an eye 2 at its upper end to receive a pivot-pin b^5 , extended through the head at the upper end of the slots b^2 , and the lower end of the wire is bent into a curved arm 3 eccentric to the said pivot-pin, thus presenting a cam-face adapted to engage and bear upon the top of the heddle-bar, as shown in Fig. 1.

So far as described the locking member does not differ from what is shown in the patent hereinbefore referred to; but in accordance with my present invention I put a lateral twist or bend in the arm 3, as at 4. (Clearly shown in Fig. 4 in plan, and in edge view Fig. 2.) This lateral bend or twist causes the locking member to forcibly engage the opposite side walls of the slot b^2 , as will be obvious from an inspection of Fig. 3, so that the locking member is held in operative position not only by the friction of the cam-arm 3 against the top of the heddle-bar, but additionally by the lateral friction between the arm and the side walls of the slot. It will be understood by an inspection of Fig. 1 that the farther the locking member is pushed into the slot the more tightly will it bear upon the heddle-bar; but in order to effect this inward movement said member must be forcibly pushed or hammered into place owing to the lateral friction against the slot-walls. The lateral holding power of the locking member is so great that the shaking and vibration of the harness-frame seem to

have no effect thereon, and it is wholly independent of the heddle-bar in its action—that is, whether the heddle-bar be present or absent the holding force due to lateral friction is equally effective. Of course the release of the heddle-bar must be effected by rapping the back of the locking member with a hammer or other suitable tool to push it out of the slot in the head. As shown in Fig. 3, the lateral bend causes the locking member to bear at three different places on the side walls of the slot, and as the wire is heavy and the arm 3 relatively short the lateral spring action due to the bend 4 is very powerful.

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

1. In a loom-harness frame, side bars having longitudinally-slotted heads, a detachable heddle-support adapted to be seated in said heads, a resilient locking-cam on each head to engage and retain the heddle-support in position, and a lateral bend in each cam to frictionally engage the side walls of the slot and prevent accidental release of the said cam.

2. In a loom-harness frame, side bars having longitudinally-slotted heads, a detachable heddle-support adapted to be seated in said heads, and a locking member pivotally mounted in the upper end of each slot and having a

resilient, laterally-bent cam portion to engage the top of the heddle-support and retain it seated in the bottom of the slots, the lateral bend causing the cam portion to frictionally engage the opposite side walls of the slot.

3. In a loom-harness frame, side bars having longitudinally-slotted heads, a detachable heddle-support adapted to be seated in said heads, and a spring-wire locking member pivotally mounted in the upper end of each slot and having at its lower end a cam-arm having a lateral bend to frictionally engage the side walls of the slot and prevent accidental movement of the locking member therein.

4. In a loom-harness frame, a side bar having a longitudinally-slotted head, a detachable support adapted to be seated in the lower end of the slot, and a resilient locking-cam for the heddle-support, pivotally mounted in the upper end of the slot and having integral means to engage the opposite side walls thereof and prevent accidental movement of the locking member in the slot.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. NUTTING.

Witnesses:

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