

(No Model.)

R. RIGBY.
WEFT FORK OR FEELER.

No. 474,780.

Patented May 10, 1892.

Fig:1.

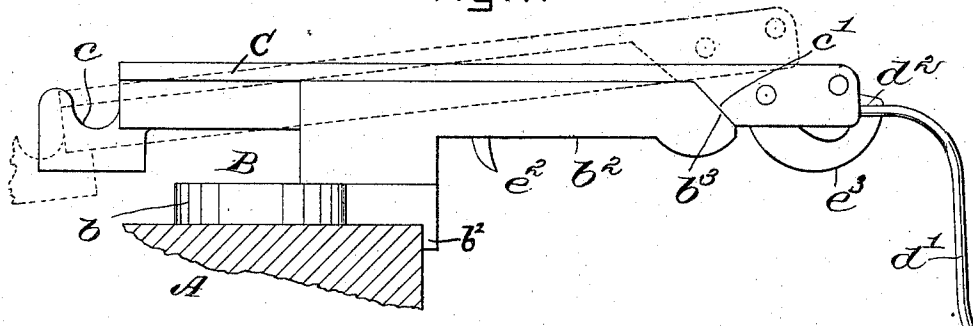


Fig:2

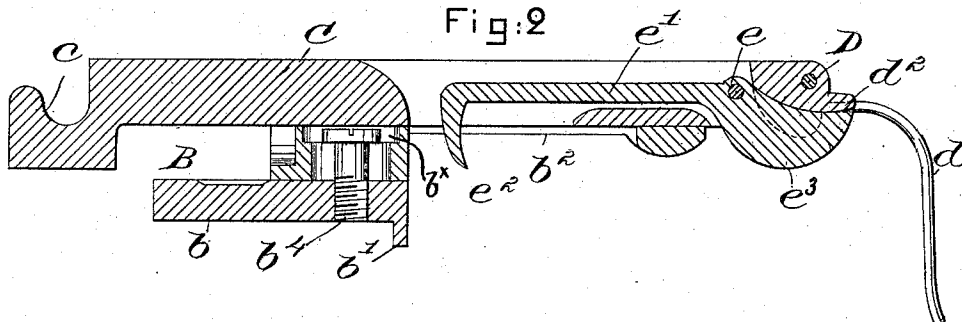


Fig:3.

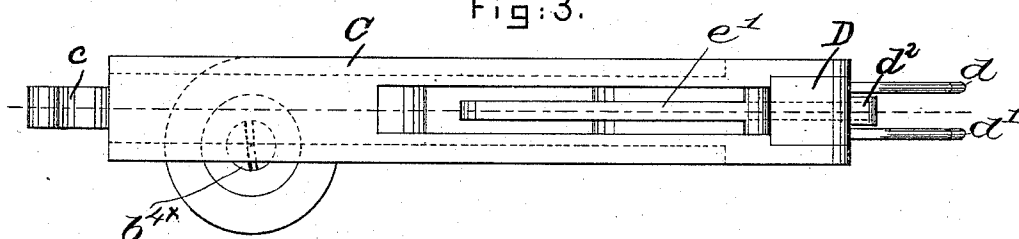
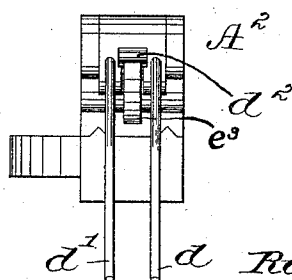


Fig:4.



Witnesses.

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UNITED STATES PATENT OFFICE.

RICHARD RIGBY, OF FALL RIVER, ASSIGNOR OF ONE-HALF TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

WEFT FORK OR FEELER.

SPECIFICATION forming part of Letters Patent No. 474,780, dated May 10, 1892.

Application filed November 30, 1891. Serial No. 413,616. (No model.)

To all whom it may concern:

Be it known that I, RICHARD RIGBY, of Fall River, county of Bristol, State of Massachusetts, have invented an Improvement in Weft Forks or Feelers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Weft forks or feelers as now commonly constructed are pivoted upon horizontally-sliding bars adapted to reciprocate in stands secured to the top of the breast-beam, the tails of the forks having shoulders adapted to be caught by the head of what is called a "hammer" whenever the weft is absent and fails to elevate the tail of the fork. This class of weft-fork gives at times considerable trouble by its tendency to rebound, especially when the loom is being run at high speed, and when the shuttle by accident strikes the slide great damage is done. To overcome these difficulties, I have devised a novel weft-fork in which the forked arm to be engaged by the hammer is detached from the fork proper and has a separate fulcrum on the slide-bar, the said forked arm being made as a lever, the short arm of which is acted upon by a toe attached to or forming part of the weft-fork. I have also provided the bar and the stand with suitable inclined or beveled surfaces, whereby when the shuttle by accident strikes the bar the latter is thrown out of its slide, thus avoiding smashing of parts.

One part of my invention consists in a weft-fork having a toe and a slide and stand, combined with an independent lever-like hook-piece having its fulcrum on the stand separate from and independent of the toe.

Other features of my invention will be hereinafter pointed out in the claims at the end of this specification.

Figure 1 in side elevation represents a weft fork or feeler embodying my invention and part of a breast-beam. Fig. 2 is a longitudinal section of the said weft-fork, the breast-beam being omitted. Fig. 3 is a top or plan view thereof, and Fig. 4 a right-hand end view of the fork shown in Fig. 1.

In the drawings, A is part of a breast-beam. The stand B consists, essentially, of a foot b,

a flange b' , and a trough-like arm b^2 , having its forward end beveled or inclined, as at b^3 , the said arm being connected preferably adjustably with the foot by a screw b^4 . This stand is held to the breast-beam by a suitable screw or bolt b^x , as shown in Fig. 3. The slide C, placed loosely in the stand and having the usual notch c , is beveled or inclined at one or both sides, as at c' , to normally rest against the bevel or incline b^3 , so that in case the slide strikes against, or is struck by any substance, as a shuttle, the slide may slide backwardly and rise from the stand, as shown in dotted lines, Fig. 1. The slide has pivoted between ears at its front end a tine-head D, having two tines $d d'$, and a toe d^2 . (Shown by full lines, Fig. 4, and in section, Fig. 2.) The slide has also pivoted upon it at e , a lever e' , having a hook e^2 , the short arm of the lever being shaped to act upon the said toe d^2 .

The full lines, Figs. 1 and 2, show the parts in working position. It will of course be understood that the hook e^2 is to be engaged by the head of the usual weft-hammer. Whenever the weft is present in front of the reed and the tines $d d'$ contact with the weft, the toe d^2 , acting on the short arm e^2 of a lever e' , lifts the hook from the range of movement of the usual weft-hammer. By dividing the head carrying the tines from the lever it is possible to avoid the rebounding of the lever, a common difficulty when the head and tines form part of the lever, as is the case in all the forks now used. So, also, by dividing the head from the lever, the action of the tines and head is made more delicate. In ordinary weft-forks it is customary to bend the tines of the fork to thus place the acting portions thereof correctly with relation to the forward position of the lay; but by connecting the arm b^2 with the foot by the screw b^4 and slotting the arm about the screw, as at b^x , it is possible by simply relaxing the screw to adjust the arm, and with it the slide-bar and fork, longitudinally toward or from the lay, as desired, thus obviating the necessity of bending the tines of the fork.

By locating the pivot of the tine-carrying head between the reed and the pivot e of the lever e' it is possible to get a greater move-

ment for the tines than were the tine-head and lever mounted on the same pivot. This construction enables the tines to have all the movement needed, and yet the heavier lever 5 *e'* has given to it its minimum movement, or just enough movement to lift it from the path of the usual hammer which engages the tail-piece *e*² of the lever. The lever *e'* for the best results must be sufficiently heavy not to 10 jump, and by putting it on a separate fulcrum the desired amount of leverage is given to enable the tine-head to move the lever easily.

Having described my invention, what I claim as new, and desire to secure by Letters 15 Patent, is—

1. A weft-fork composed of a stand, a slide-bar resting upon the top of and movable longitudinally thereon, a lever pivoted on said bar and having a hook, and a tine-carrying 20 head pivoted independently of and beyond the said lever and having a toe or projection

to engage and turn the said lever, substantially as described.

2. A stand having a beveled or inclined end or surface, combined with a slide-bar movable 25 on said stand and having a beveled or inclined surface adjacent to the beveled end of the stand and on which it normally rests, substantially as described.

3. The slide-bar provided with a fork and 30 the flanged foot of the stand, combined with a slotted arm carrying the slide-bar and mounted adjustably on the said foot, and a screw in said slot to hold the arm in adjusted position, substantially as described. 35

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

RICHARD RIGBY.

Witnesses:

THOMAS CLARKE,
B. J. McDONALD.