(No Model.) 2 Sheets—Sheet 1.

A. H. LUSCOMB.

WEFT FORK FOR LOOMS.

No. 421,948. Patented Feb. 25, 1890.

Fig. 1.

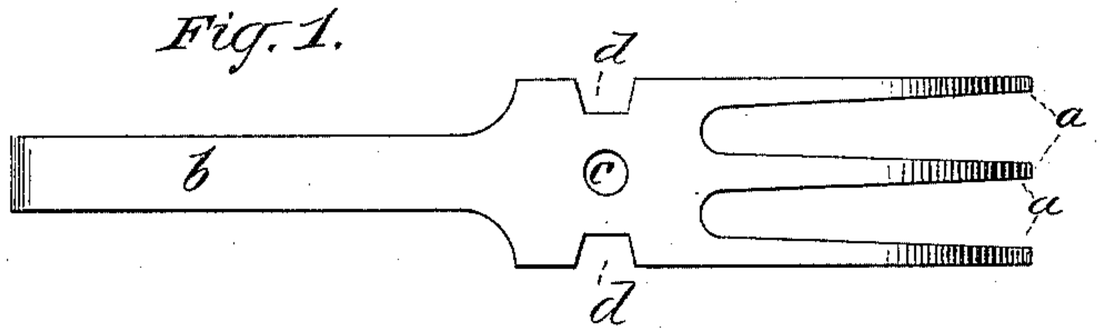


Fig. 2.

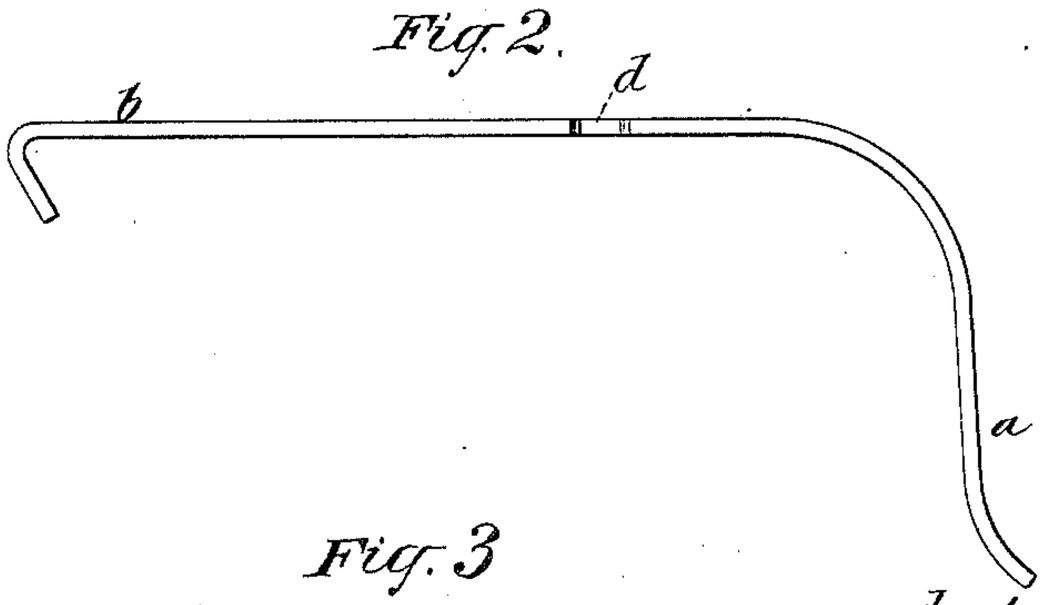


Fig. 3

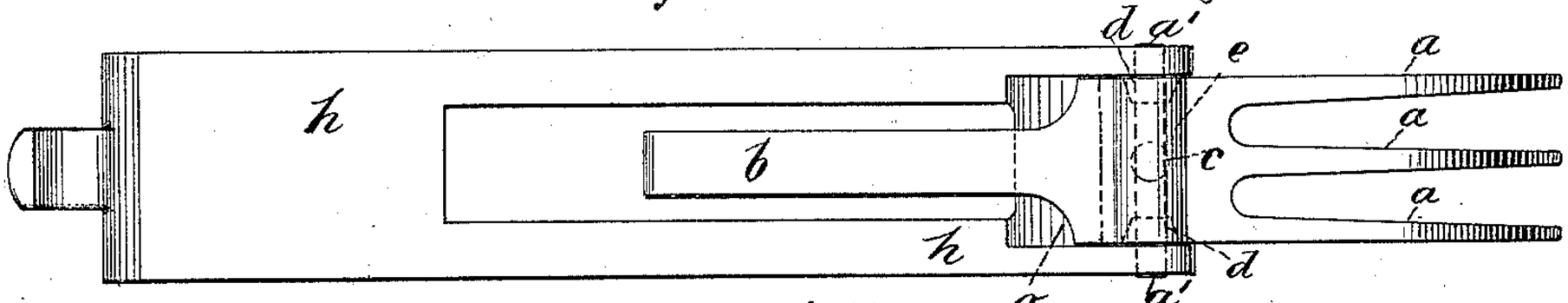


Fig. 4.

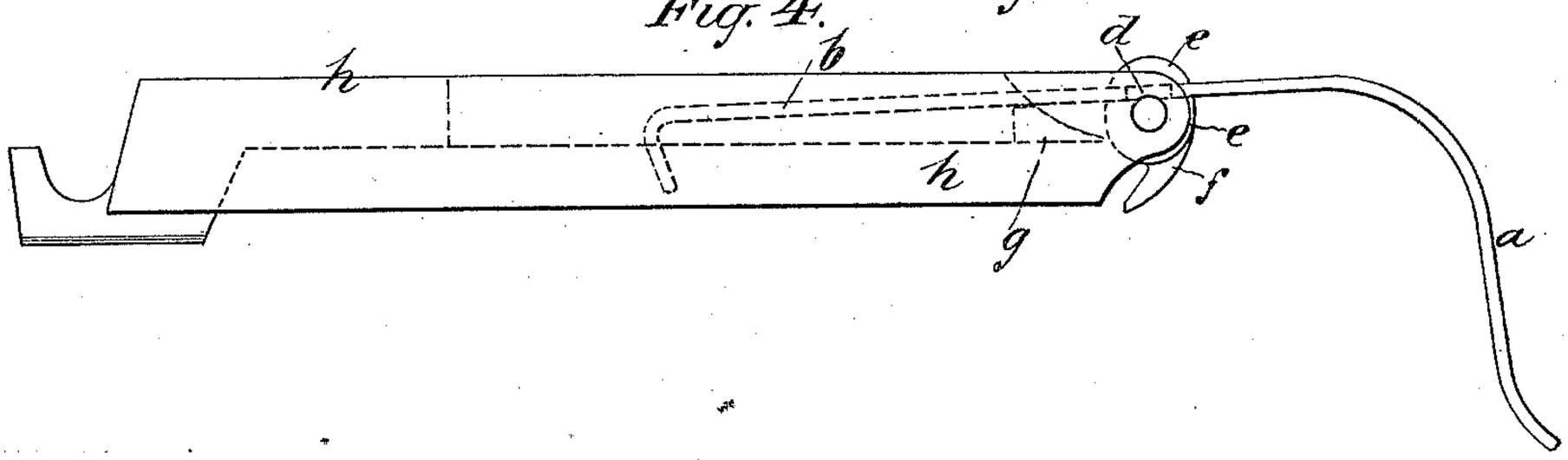
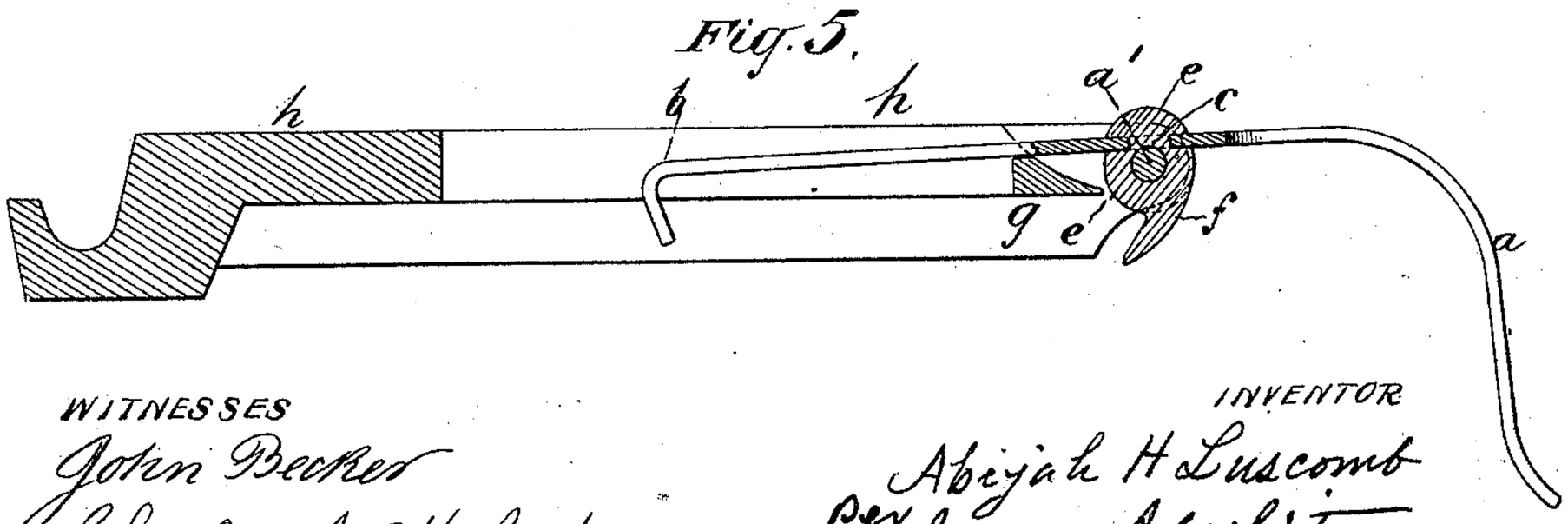


Fig. 5.



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(No Model.) 2 Sheets—Sheet 2.

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WEFT FORK FOR LOOMS.

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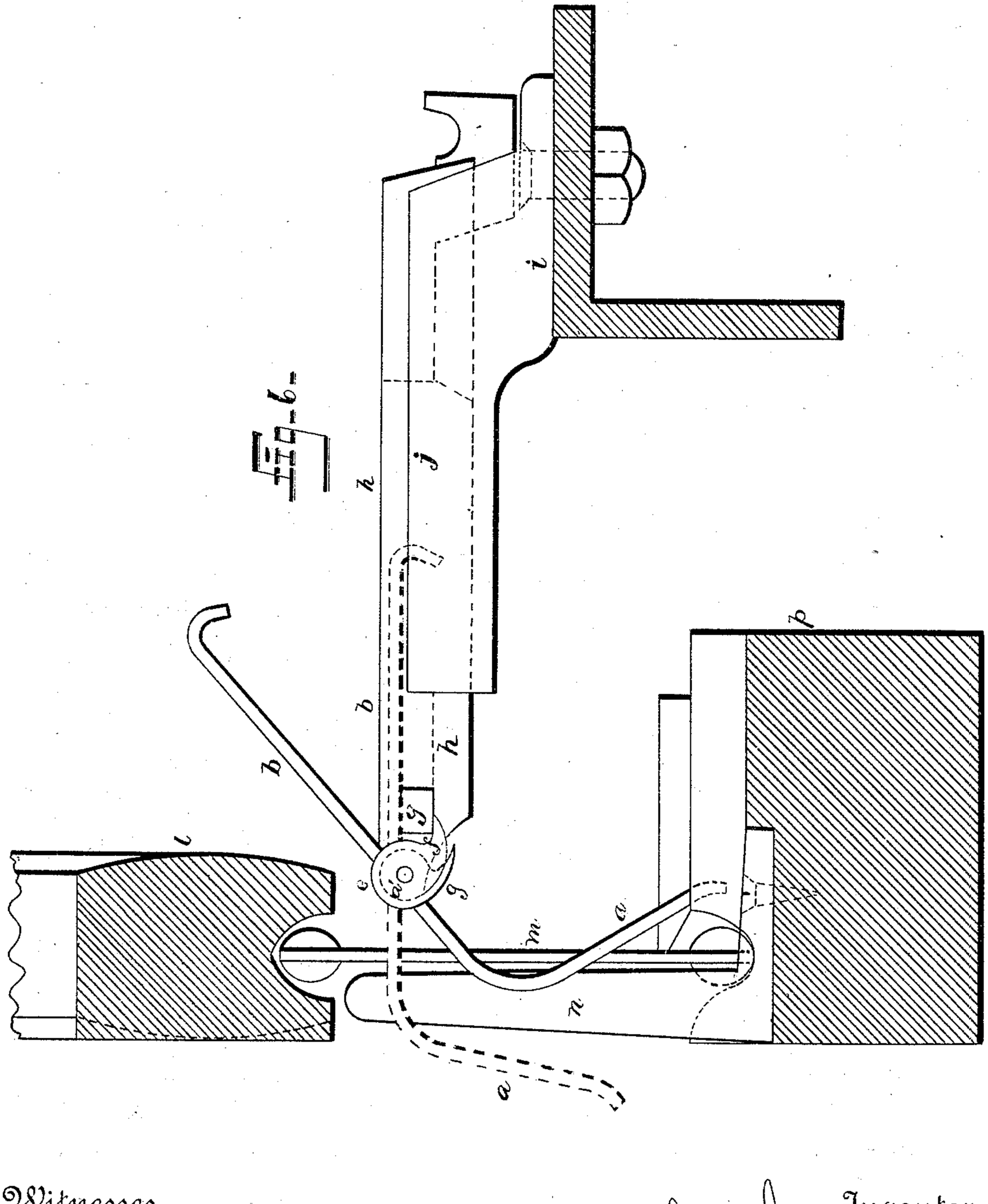

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UNITED STATES PATENT OFFICE.

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WEFT-FORK FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 421,948, dated February 25, 1890.

Application filed December 15, 1887. Serial No. 257,966. (No model.)

To all whom it may concern:

Be it known that I, ABIJAH H. LUSCOMB, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Weft-Forks for Looms; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of devices appertaining to power-looms for weaving known as "weft-forks," and designed to aid in throwing the belt or band from the fast to the loose pulley of the loom in the event of the breaking of the weft-thread in the shed, or in the event of the absence of the weft-thread from the shed, in order to stop the motion or operation of the loom pending repair of the accident or the replacement of the weft-thread.

My invention comprises a weft-fork which comprises certain novel features in its construction, whereby any injury at its pivotal part may be readily repaired, and whereby the certainty of operation in this class of apparatus is very materially increased.

Figure 1 is a top view, and Fig. 2 is a side view, of a blank which forms part of a weft-fork made according to my invention. Figs. 3 and 4 are corresponding views of my improved weft-fork and its supporting device. Fig. 5 is a longitudinal sectional view of the same; and Fig. 6 is a sectional elevation of the weft-fork and its co-operating parts of the loom, illustrating the manner in which the weft-fork is prevented from striking the hand-rail of the loom by reason of the impetus given by the weft-thread when suddenly broken.

The blank shown in Figs. 1 and 2 conforms, so far as may be, to that of the common weft-fork, except that between its tines *a* and shank *b* it has an opening *c* and lateral notches *d*, which serve to retain in position the hub *e*, with its stop *f*, which are intended to be cast in one piece upon the blank by any of the usual or suitable means known in the art of casting. Said hub *e* and the stop *f* may be of any suitable metal or material, but preferably of soft metal, such as block-tin, spelter, or suitable alloy of tin and lead or other appropriate metals.

If from any cause the hub is injured, it can be readily removed by heat or otherwise and another be put in its place. The stop *f*, acting in conjunction with the end or shoulder *g* of the usual supporting device *h*, limits the movement of the weft-fork when thrown into operation, and thus prevents it from tilting too far. It also prevents the fork from rebounding and catching the shipping-lever at the wrong time and improperly stopping the loom. It also prevents the weft-fork from striking the hand-rail of the loom by reason of any impetus given by the weft-thread when suddenly broken. Through this hub *e* is provided the bearing for the pivot *a'*, by which it is connected to the supporting device *h*, the hub being thus the pivotal portion of the fork.

Referring to the above-stated advantages, they are due to my improved construction of weft-fork, because in the operation of the device in the loom the stop *f* limits the tilting movement of the fork under the strain exerted by the tension of the weft, and thus prevents the shank *b* from being thrown upward or inward far enough to strike the hand-rail. The stop *f* also prevents the shank *b* from being thrown upward and inward to such an extent that the momentum of its downward and return movement will cause the weft to yield and the shank to act unnecessarily upon the shipping-lever. In these particulars my improved fork obviates very serious defects in this particular device as now constructed and used. The stop *f* is formed like a finger, and projects tangentially from the hub beneath the tines contiguous to the end of the fork slide or support.

The manner in which the movement of the fork is restricted is illustrated in Fig. 6 of the drawings, wherein *i* indicates the breast-beam of the loom in cross-section. *j* is the shoe for the slide *h*, which carries the fork. *l* is the hand-rail in cross-section. *m* is the reed. *n* is the rack, and *p* is the lathe. In

this figure the fork is shown with its stop *f* in contact with and pressing against an abutting part *g* of the fork-supporting slide *h*, so as to prevent the shank of the fork from striking the hand-rail *l*; and it is also shown in the position in which it remains when the weft-thread is out or broken.

What I claim as my invention is—

1. A weft-fork having cast upon the shank thereof a pivotal hub *e*, of metal fusible at a low degree of heat, and having an integral tangential finger-stop *f*, substantially as described, for the purpose specified.

2. A weft-fork provided between its tines and shank with a projecting stop *f*, substantially as and for the purpose herein set forth.

3. A weft-fork having a pivotal hub *e* and a projecting stop *f* integral therewith, arranged between the tines and the shank of the fork, substantially as and for the purpose herein set forth.

4. In a weft-fork, the combination, with the shank thereof having edge notches *d d*, of a pivotal hub of fusible metal cast upon and locked to said shank by the edge notches, substantially as described, for the purpose specified.

5. In a weft-fork, the combination of a blank having lateral notches *d* and a hub *e*, with a stop *f*, of cast metal, integral therewith, substantially as and for the purpose herein set forth.

ABIJAH H. LUSCOMB.

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