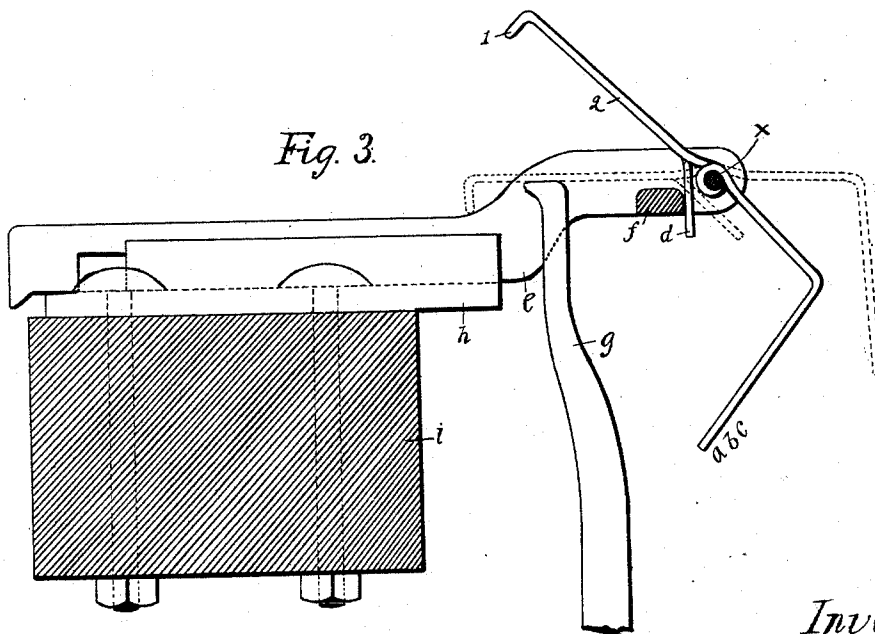
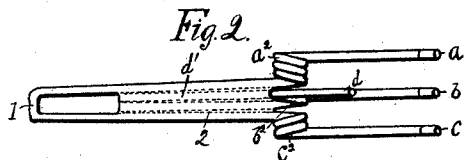
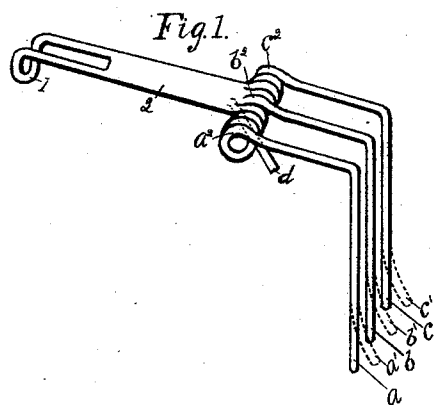


E. L. HERSOM.
WEFT FORK FOR LOOMS.

Patented Nov. 1, 1892.



Jas Brunner
 Gene Brannister

Ernest L. Hanson,

Robert F. Raymond,
Attorney.

UNITED STATES PATENT OFFICE.

ERNEST L. HERSOM, OF NEW BEDFORD, MASSACHUSETTS.

WEFT-FORK FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 485,346, dated November 1, 1892.

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To all whom it may concern:

Be it known that I, ERNEST L. HERSOM, a citizen of the United States, residing at New Bedford, 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.

My invention relates to the co-operating part of the power-loom known as a "weft-fork," which is designed to aid in throwing the belt from the fast to the loose pulley of the loom in the event of the breaking of the weft-thread or in the event of the absence of the weft-thread from the shed, in order to stop the useless operation of the loom and to allow the repair or replacement of the weft-thread.

The objects of my invention are, first, to prevent the fork from tilting too far; second, to prevent the tines of the fork from getting astride of the weft-hammer, and, third, to afford facility for the proper adjustment of the tilting movement of the fork.

In the accompanying drawings, Figure 1 represents a perspective view, and Fig. 2 is an underneath view, of a weft-fork, both made according to my invention. Fig. 3 is a sectional view of a weft-fork and its supporting device with one of its co-operating parts, illustrating the manner in which the weft-fork is prevented from getting astride of the weft-hammer by reason of any impetus given the fork by the shuttle striking it when the loom is stopped suddenly.

Figs. 1 and 2 represent a weft-fork made of several pieces of wire bent to form tines or fingers $a\ b\ c$ and coiled, as at $a^2\ b^2\ c^2$, and the ends soldered or otherwise put together to form a shank, as at 2, with the catch 1, and conform as far as may be to the common weft-fork, with the tines of the fork made straight, as at $a\ b\ c$, or with the tines curved, as shown by the dotted lines $a'\ b'\ c'$, as may be desired.

The first object of my invention—namely, to prevent the fork from tilting too far on its

pivot x —is accomplished by means of a check-wire $d\ d'$, which is soldered into the shank of said fork parallel with the same, with the end projecting downward and underneath, so as to strike the rest f , as represented in Fig. 3, which limits the movement of the weft-fork after the impetus is given by the weft-thread, and thus prevents the fork from tilting too far. Thus my invention causes it to return more quickly and gives it time to rebound from the hammer and return thereto before the impetus is again about to be given by the weft-thread. In this way it prevents the fork from returning too late and by its momentum forcing the weft-thread through the rack and catching onto the hammer and improperly stopping the loom. The check-wire also prevents the fork from getting astride of the weft-hammer by reason of any impetus given by the shuttle striking the fork when the loom is stopped suddenly or by the impetus given the fork by its slipping from the weft-hammer when the loom is set in motion.

Fig. 3 shows the manner in which the fork is prevented from getting astride of the weft-hammer, wherein i represents the breast-beam of the loom in cross-section. h is the stand for the slide e , which supports the fork. g is the head of the weft-hammer. In this figure the check-wire d is shown to be in contact with the rest or shoulder f , which limits any further movement of the fork, thus preventing the tines from getting astride of and catching onto the hammer. This obviates a very serious defect in the fork as at present constructed, for when the fork is thus caught onto the hammer, as is quite frequently the case at present, it allows the useless operation of the loom in case of the absence or breakage of the weft-thread. The check-wire also affords facility for the proper adjustment of the tilting movement of the fork, as it can be bent to any desired angle, thereby allowing or checking the rocking movement of the fork by the contact of the check-wire d with the rest f either early or late, as may be desired.

The method of adjusting the rocking movement of the fork is a novel and very essential feature, as the impetus given the fork varies

according to the size and tension of the weft-thread, thereby making it necessary to adjust this rocking movement accordingly.

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

The combination, in a weft stop-motion for looms, of the slide *e*, having the stop-rest *f* and the pivot for the weft-fork, with the weft-
10 fork pivoted thereon, and the adjustable stop-

wire *d d'*, forming a part of the shank of the weft-fork, the free end *d* of the said stop-wire extending under the said pivot and adapted to be bent to limit by contact with the stop-rest *f* the rocking movement of the fork, substantially as shown and described. 15

ERNEST L. HERSOM.

Witnesses:

ARTHUR N. HERSOM,
WILLIAM BOWKER.