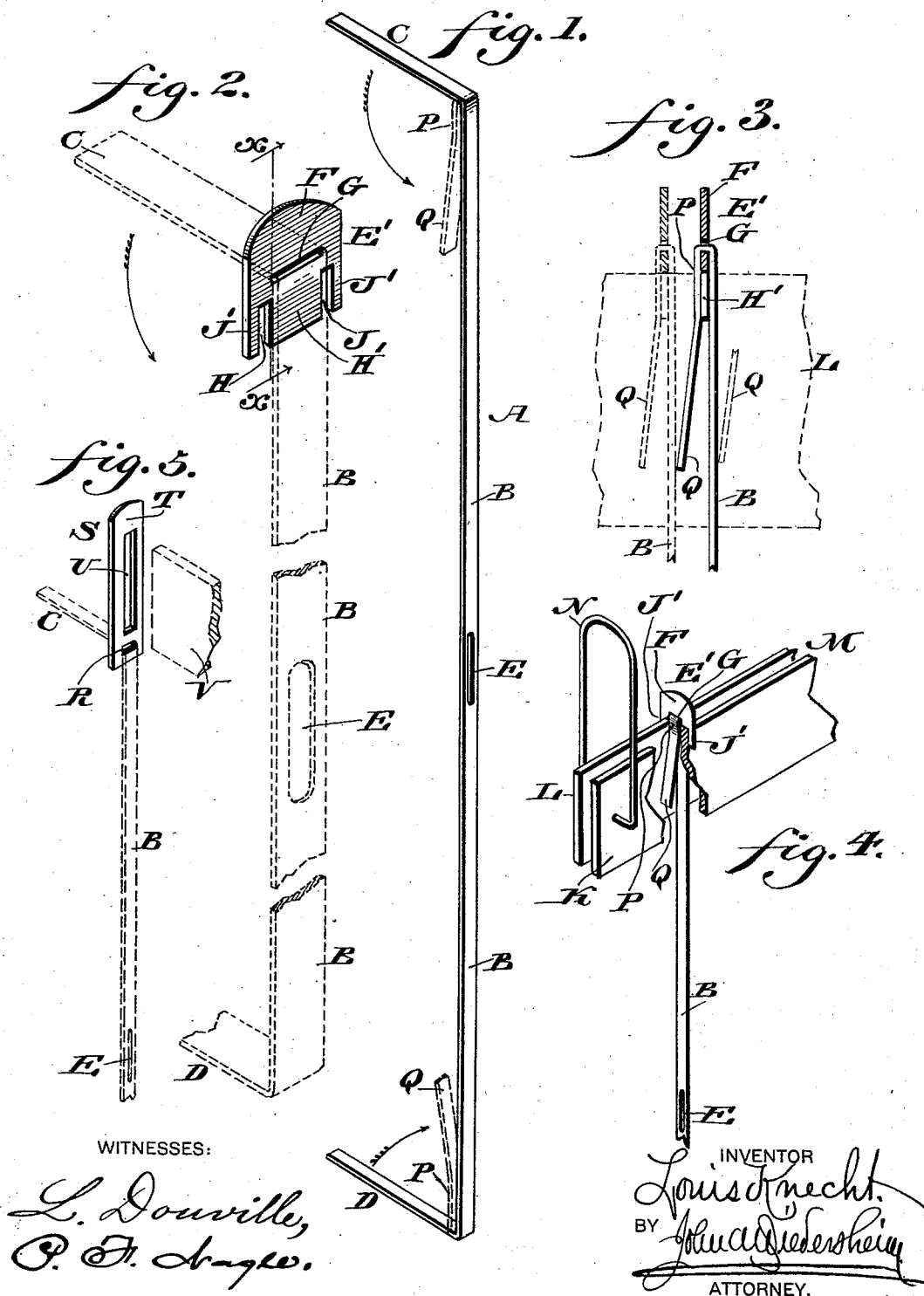


(No Model.)

L. KNECHT.
HEDDLE.

No. 567,396.

Patented Sept. 8, 1896.



WITNESSES:

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HEDDLE.

SPECIFICATION forming part of Letters Patent No. 567,396, dated September 8, 1896.

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To all whom it may concern:

Be it known that I, LOUIS KNECHT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Heddles, which improvement is fully set forth in the following specification and accompanying drawings.

It has heretofore been the custom to mount a set of heddles of the character to be hereinafter referred to upon a heddle-frame in such manner that in the case of breakage or injury to any of the heddles in the middle of the set it was necessary to either remove all the adjacent ones, in order to replace or get access to the injured heddle, or else replace the latter by a heddle of thread, which was liable to break, thereby necessitating considerable labor and expense, and my invention has for its object the construction of a heddle with a separable or detachable head therefor, which head is adapted to engage the heddle-frame, and to be provided with a slot through which an end of the heddle may be inserted and afterward bent around so as to be securely fastened therein, whereby in case of injury to one of the heddles of a set the same can be readily removed by simply disengaging its ends from its respective head, after which a new heddle can be readily placed in position, and to this end my invention consists of a novel construction of heddle and detachable head therefor, said head being adapted to be secured upon the heddle-frame.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a perspective view of a heddle embodying my invention, showing the position the ends assume relative to the body of the heddle prior to being bent and secured to their respective heads. Fig. 2 represents a perspective view of a form of detachable head employed, the heddle proper to which the same is applicable being shown in dotted lines. Fig. 3 represents a sectional view on line *x x*, Fig. 2, showing the position the adjacent heddles of a set assume with respect to each other. Fig. 4 represents a perspective view of a heddle and its detachable head in position upon the heddle-frame. Fig. 5 represents a perspective view of another form of detachable head employed and a por-

tion of the heddle and frame to which the same is applicable, shown in dotted lines.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a heddle complete prior to being placed in position, the same consisting of the strip or body B, which is constructed of suitable material, and has the ends C and D bent at an angle to said body, which latter is provided with an eye E intermediate said ends.

E' designates a detachable head of novel construction, the same consisting of the body portion F, which has a slot G therethrough. The lower portion of said head at an angle to the slot G is cut out so as to provide recesses H and J, between which is left a depending portion H', said head being further provided with the external arms J', formed by the recesses H and J, which latter engage the sides K and L of the heddle-frame M, when the parts are assembled as seen in Fig. 4, said frame being provided with the loop or support N, which is provided with an offset as indicated in said Fig. 4.

The heddle B having been placed in position by the insertion of an end C through the slot G of the head E', said end is bent around so that the portion P is caused to contact with the depending body portion H' of the head, while the free end Q of said bent portion C springs out and is normally substantially in contact with the adjacent heddle B, as will be understood from Fig. 3.

In Fig. 5 the heddle B is the same as already described, the free end C having been inserted in the slot R of the detachable head S, the same consisting of the body portion T, which has the elongated slot U therein, through which the bar or rod V is adapted to be inserted, thereby holding all the heads, and consequently their respective heddles, in their proper position.

The operation is as follows: The heads F are placed upon the sides K and L of the heddle-frame, as indicated in Fig. 4, the edges of said sides entering the recesses H and J, whereby said heads are prevented from lateral displacement, but are capable of longitudinal movement relative to said frame M. The bent ends C of the heddles are passed through the slots G, and are bent as already described,

the portion P being in substantial contact with the portion H', while the free end Q is somewhat sprung out, so as to contact with the adjacent heddle B, as will be understood from Fig. 3, thereby holding the heddle and their heads normally in substantially the same relative position to each other.

In Fig. 5 the free ends C of the heddles B are passed through the slots R of their respective heads S, and are bent against the heads in substantially the same manner as shown in Fig. 3, the said heads S and their respective heddles being held in position by means of the bar or plate V.

When it is desired to remove an injured heddle, or to get access to a heddle in the middle of a set, or to inspect the same for any purpose, it is only necessary to manipulate the bent ends of the injured heddle which passes through the heads E' or S, as the case may be, so that it can be readily removed therefrom, after which another heddle can be quickly and readily inserted in position, as is evident.

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

1. A heddle-frame, a removable head supported thereon, and provided with a slot, and a heddle having an end passing through said slot and embracing the sides of said head, and terminating in a flaring end adapted to

bear against an adjacent heddle, said parts being combined substantially as described.

2. A heddle-frame having the separated sides L and K, the head E' having the slot G and provided with the recesses H and J forming the depending portion H' and external arms J', and the heddle B having a bent end passing through said slot D, said parts being combined, substantially as described.

3. A heddle-frame having separated sides, a head having recesses in its lower end forming a central depending portion and side arms, said head resting on said separated sides, and a heddle having bent spring ends passing through a slot in said head, said parts being combined, substantially as described.

4. The combination of a heddle-frame composed of a plurality of substantially parallel plates, a head supported on said plates and having recesses therein adapted to engage the latter, a slot in said head, through which an end of said heddle is adapted to be passed and bent, the upper portion of said heddle near the bend, engaging the body of said head, while the extremity of said bent end is sprung out at an angle thereto, and adapted to be substantially in contact with an adjacent heddle, substantially as described.

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Witnesses:

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