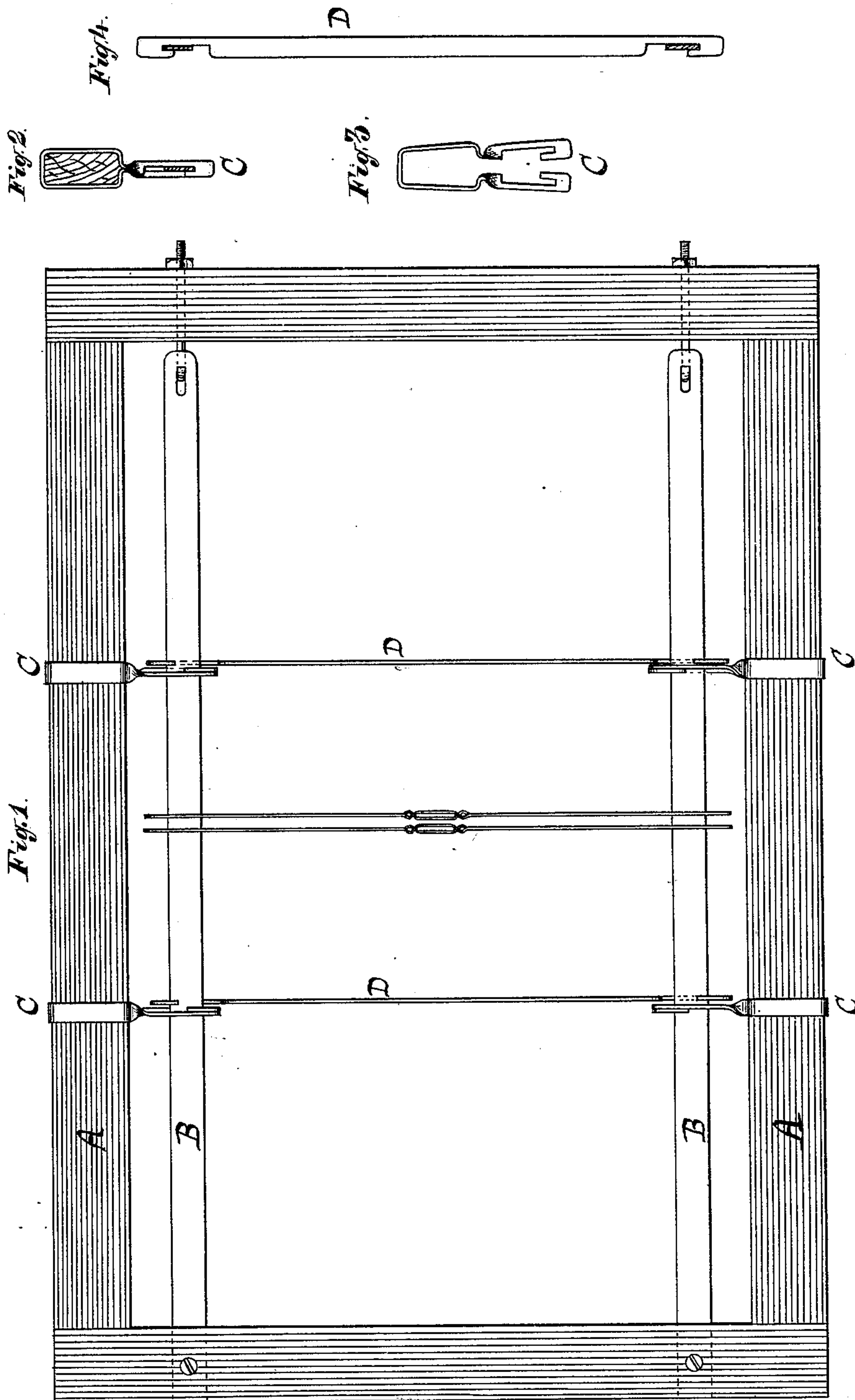


(No Model.)

S. SEWALL, Jr.
Heddle Frame.

No. 234,077.

Patented Nov. 2, 1880.



Witnesses:

Henry Eichling
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UNITED STATES PATENT OFFICE.

SAMUEL SEWALL, JR., OF TEWKSBURY, MASSACHUSETTS.

HEDDLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 234,077, dated November 2, 1880.

Application filed June 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SEWALL, Jr., of Tewksbury, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Heddle-Frames, of which the following is a specification.

It is of importance in the mounting of heddles that the rods on which they are supported should be held at a uniform distance from each other. It has been sought to accomplish this by tying the heddle-rods to the transverse beams of the frame or shaft by means of rings or clasps embracing such beams at short intervals; but when these devices alone are used it is found that any warping or springing of the beams will be communicated to the heddle-rods, and to that extent will impair the freedom of play of the heddles. To prevent this tie-rods have also been used spanning the vertical distance between the heddle-rods.

The present invention relates to a special construction of tie-rods for the purpose, whereby they can be readily applied and removed.

The invention also presents a peculiar construction of clasp for connecting the heddle-rods to the beams of the frame.

Referring to the accompanying drawings, which illustrate the invention, Figure 1 is a front view of a heddle-frame having the tie-rods and the improved form of tie-piece or clasp. Fig. 2 is a side view of such clasp, shown as embracing the heddle-rod. Fig. 3 is a view of the clasp detached from the frame and rod and with its jaws sprung apart, and Fig. 4 is a side view of one of the tie-rods.

In the drawings, A A are the upper and lower members of the heddle-frame; B B, the usual heddle-rods connected to the uprights of the frame in any well-known manner; C C, the sliding clasps, which constitute the improved tie-pieces for connecting the heddle-rods to the transverse sections A A of the frame, and D D the tie-rods for connecting the heddle-rods to each other.

The clasps C C, instead of being bolted to the bars of the frame, are made to surround them, so as to slide freely thereon, and thus occupy any required position, and by making

these clasps with two jaws, as shown in Figs. 2 and 3, whereby they are made to bear upon both sides of the heddle-rods, they serve, to an extent, to stay such rods against springing laterally. Preferably, also, they should be made of some elastic metal, so that when detached from the rods they will spring open, as shown in Fig. 3. This, however, is more a matter of convenience than of necessity.

The main object in making these clasps to slide upon the bars of the frame is to furnish means for the ready adjustment of the heddle according to the work in hand, which manifestly can be more readily effected when the tie-pieces slide than when they are bolted in fixed position. As with other forms of tie-pieces, a convenient interval between these clasps will be about two feet.

The tie-rods D D, applied substantially as shown, and particularly in connection with tie-pieces uniting the heddle-rods to the transverse bars of the frame, will effectually prevent such bars from springing apart, and thus disturbing the parallelism of the heddle-rods. It follows that the use of such tie-rods, in combination with suitable tie-pieces for connecting the heddle-rods to the transverse bars of the frame, is admirably adapted to secure rigidity to all parts of the heddle-frame, and thus preserve to the heddles freedom of motion upon their rods. These tie-rods, as well as the clasps C C, should slide upon the heddle-rods.

It will be observed that any of the clasps C C can be readily put on or taken off by simply springing the heddle-rod sufficiently to let the tips of the hook portions of the clasp pass under it. The tie-rods, of course, must, for this purpose, be moved aside sufficiently to permit the heddle-rod to be sprung to this extent.

It will also be observed that the tie-rod is so constructed that it can be readily put on or taken off by springing the heddle-rod vertically when the clasps C C have been moved laterally far enough to permit this to be done. For this reason the open hook form given to the ends of the tie-rods makes them far more convenient of adjustment than those construc-

tions in which the clasp and the tie-rod are united to each other by screws, as has heretofore been done.

What is claimed as new is—

- 5 1. In combination with the heddle-rods of a heddle-frame, one or more tie-rods, D D, constructed with open hook ends, substantially as and for the purpose described.

2. The sliding clasp or stay constructed with two arms or jaws for embracing the heddle-rod, substantially as set forth. 10

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