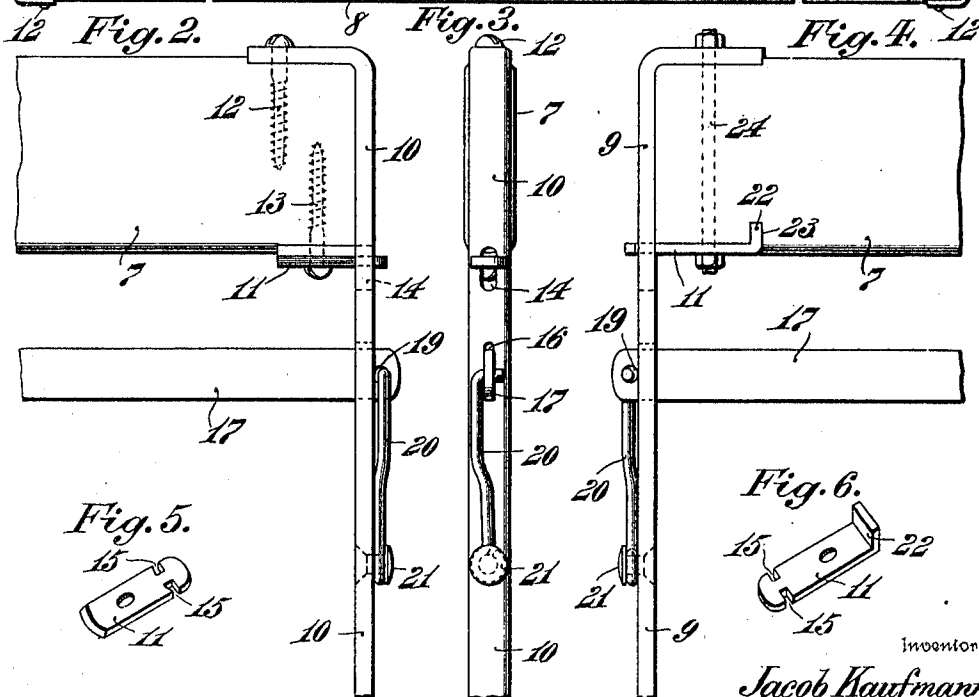
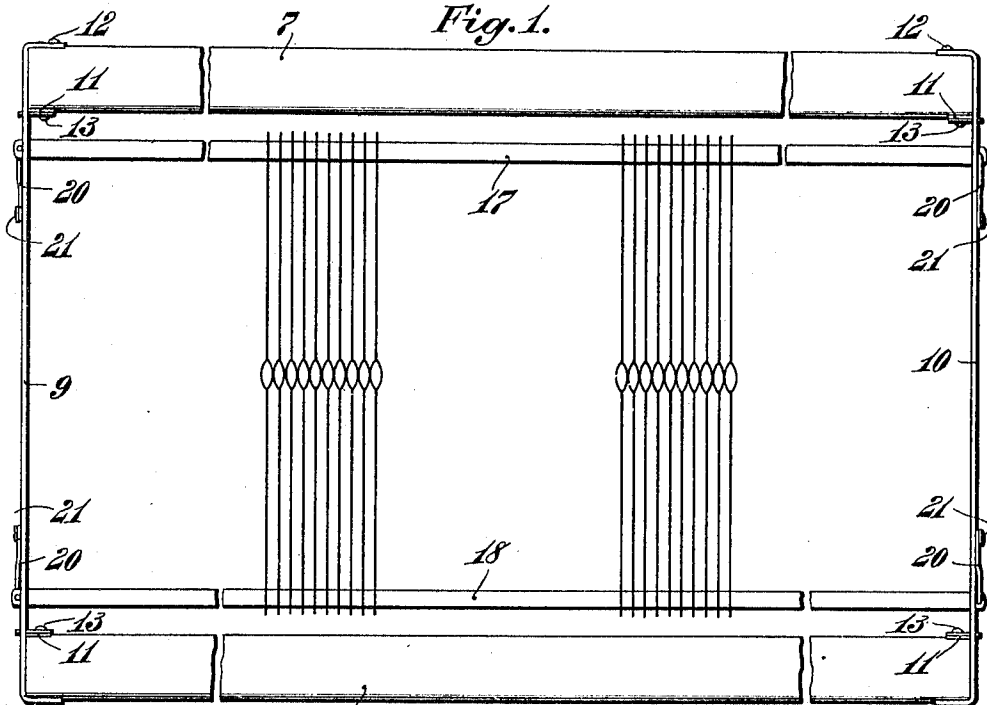


J. KAUFMANN.
 HEDDLE FRAME.
 APPLICATION FILED DEC. 20, 1899.

980,285.

Patented Jan. 3, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

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HEDDLE-FRAME.

980,285.

Specification of Letters Patent.

Patented Jan. 3, 1911.

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To all whom it may concern:

Be it known that I, JACOB KAUFMANN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Heddle-Frames, of which the following is a specification.

My invention relates to heddle frames, and it has particular relation to the construction and arrangement thereof.

The objects of my invention are to provide a simple, durable and efficient heddle frame which may be economically constructed and quickly assembled, and which will be unlikely to become disarranged under the severe conditions of use to which such devices are subjected.

The nature and characteristic features of my invention will be more readily understood from the following description taken in connection with the accompanying drawings forming part hereof, in which,

Figure 1 is a front elevation of a heddle frame embodying the main features of my invention; Fig. 2 is an enlarged detail view of one corner thereof; Fig. 3 is an end elevation of the corner of the heddle frame shown in Fig. 2; Fig. 4 is a view similar to Fig. 2, showing a modified construction; Fig. 5 is a perspective view of a notched securing member employed in the construction shown in Figs. 1 to 3; and Fig. 6 is a similar view of the notched securing member employed in the construction shown in Fig. 4.

In the particular embodiment of my invention shown in Figs. 1 to 3 of the drawings, 7 and 8 are respectively the top and bottom rails of the heddle frame, which are preferably made of wood. 9 and 10 are the end straps extending between the top and bottom rails 7 and 8 to form the outline of the frame. The end straps 9 and 10 are preferably made of bar iron and extend across the ends of the top and bottom rails 7 and 8 and have their ends bent inwardly to extend a short distance along the outer sides of said top and bottom rails 7 and 8. The end rails 9 and 10 are slotted adjacent the inner end corners of the top and bottom rails 7 and 8 for the reception of the notched securing members 11 which are shown in perspective in Fig. 5. The bent over ends of the end straps 9 and 10 are secured to the

outer sides of the top and bottom rails 7 and 8 by means of wood screws 12, and the notched securing members are likewise secured to the inner sides of the top and bottom rails 7 and 8 by means of wood screws 13. The relative proportions of the slot 14 in the end of the straps 9 and 10 and the notches 15 in the securing member 11 are such that in the assembling of the construction, the end of the notched member 11 which extends beyond the end of the top or bottom rail 7 or 8 may be passed through the slot 14 and thereafter turned at right angles to the normal position shown in the drawings, so that the notches 15 will engage the slots 14 in the end straps 9 and 10.

It will be seen that the construction hereinafore described will afford a rigid structure inasmuch as the notched securing members 11, which are mounted at the inner end corners of the top and bottom rails 7 and 8, constitute braces to maintain the stiffness of the entire structure and that the efficiency of these braces is not affected by the shrinkage or expansion of the top and bottom rails inasmuch as the slotted engagement of said securing members with the end straps 9 and 10 will readily permit such shrinkage or expansion without affecting the rigidity of the structure. The end straps 9 and 10 also have cut therein the slots 16 for the reception of the heddle supporting bars 17 and 18, which are maintained in proper position by being perforated as at 19 near their ends, which perforations are engaged by spring hooks 20 which are riveted to the outer faces of the end straps 9 and 10. The rivets 21 also form pivots whereby the spring hooks 20 may be swung out of engagement with the perforations 19 to thereby permit the heddle supporting bars 17 and 18 to be removed. The rivets 21 are preferably made flush with the inner surfaces of the end straps 9 and 10 so that the utmost width of the heddle frame may be utilized, and it will be seen that this construction of the heddle frame affords a smooth inner surface at the ends thereof so that no interference with the passage of the yarn will be had.

In the particular embodiment of my invention shown in Fig. 4 of the drawings, the notched securing member 11 is provided at its inner end with an offset 22 which is let into a complemental notch 23 in the end

bars 7 and 8. Also, as shown in Fig. 4, the turned over end of the strap 9 or 10 and the notched securing member 11 may both be secured to the end of the top and bottom rail 7 or 8 by means of a single bolt 24 passing through the various members. While the securing member shown in Figs. 1 to 4 is curved to conform to the usual curvature of the side edges of the top and bottom rails 7 and 8, if desired the notched securing members 11 may be made flat as in Fig. 6 and the top and bottom rails may be cut out at the corners thereof to form flat surfaces to receive the same.

15 Having thus described the nature and characteristics of my invention, what I claim as new and desire to secure by Letters Patent is:

20 1. A heddle frame comprising top and bottom rails, end straps extending across the ends thereof and bent over and secured

to the outer sides thereof, and bracing members secured to the inner sides of the top and bottom rails in slotted engagement with the end straps.

25 2. A heddle frame comprising top and bottom rails, end straps extending across the ends thereof and bent over and secured to the outer sides thereof, said end straps having slots adjacent the inner corners of the top and bottom rails, and bracing members secured to the inner corners of the top and bottom rails having notches complementary to the slots in the end straps.

30 In testimony whereof, I have hereunto affixed my signature in the presence of two witnesses.

JACOB KAUFMANN.

Witnesses:

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