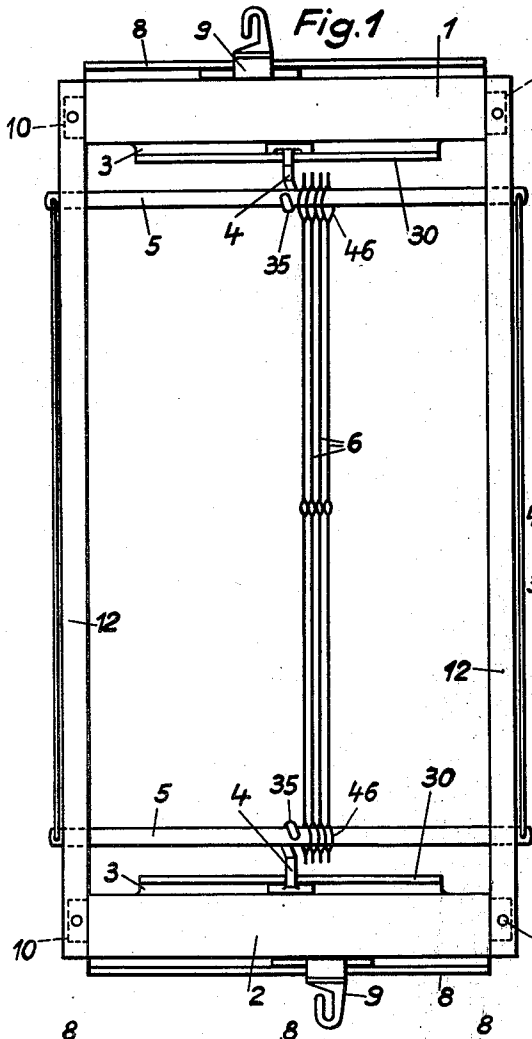
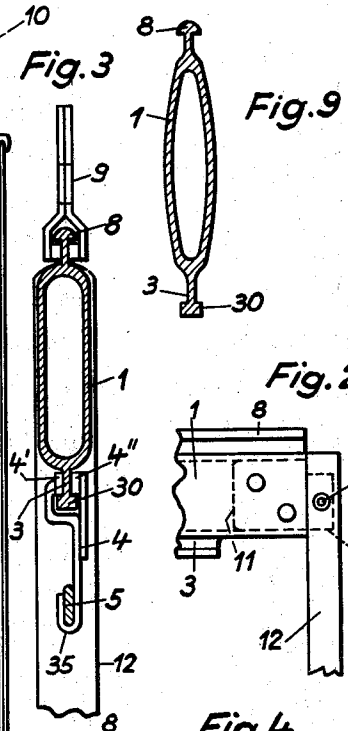
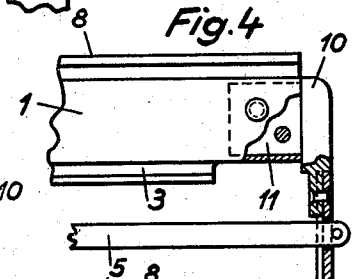
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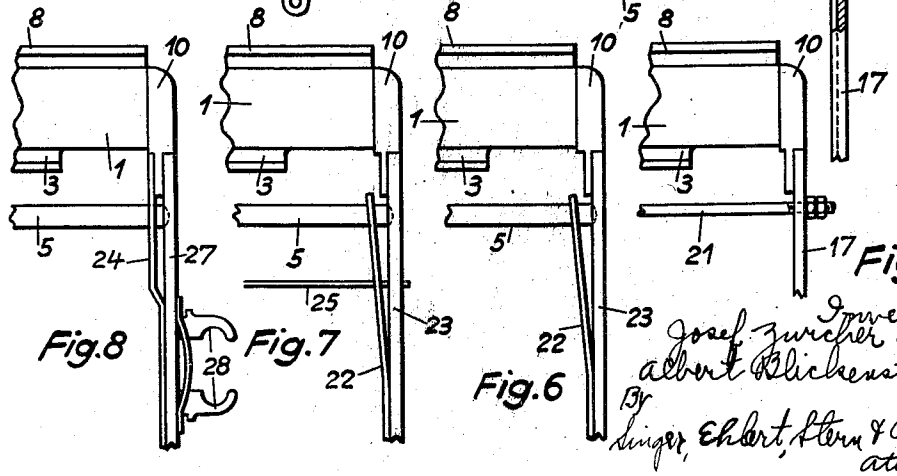
HEDDLE FRAME FOR LOOMS

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HEDDLE FRAME FOR LOOMS

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4 Claims. (Cl. 139—92)

The invention relates to a heddle frame for looms. The main object of the invention consists in the provision of a rigid heddle frame which possesses the necessary stability and which is light of weight.

A further object of the invention consists in the construction of the parts of the heddle frame in such a manner that the frame can be assembled quickly and thus inexpensively from standardised elements.

We attain these and other objects by making the staves or bars of the heddle frame of rolled or drawn metal, for instance light metal. A special cross-section is given to the staves, which ensures great strength and a minimum of weight.

The invention also extends to the particular construction of the shaft staves with guide rails on the inner edge of which there are movably arranged throughout the carriers for the assembly rails for the healds and on the outer edge thereof the suspension hooks for the shaft of healds. The peculiar profiling of these shaft staves constitutes, as hereinafter described, a particular feature of the invention.

The shaft of healds is illustrated diagrammatically in the accompanying drawing, wherein:

Fig. 1 is a front view of a shaft of healds and

Fig. 2 is a corner thereof to a larger scale,

Fig. 3 is a cross section through the stave and a side view of the hooks and slides cooperating therewith,

Figs. 4 to 6 show the connection of the corner to shafts of healds of different constructions known per se and for healds of different lengths.

Figs. 7 and 8 show by way of example cross-section of shaft staves.

Fig. 9 is a cross section through the stave.

The heddle frame shown in Fig. 1 is provided with two staves 1, 2, preferably consisting of light metal. The staves 2 are sections of hollow rolled or drawn profile rails. They all agree in their dimensions. On the inner longitudinal edge the staves 1, 2 are provided with brackets 3 of T-shaped cross-section. On these brackets 3 are provided slides 4 which are transversely movable, these slides carrying the assembly rails 5 on which the heddles 6 are slidably mounted. Each stave 1, 2 is provided on its outer longitudinal edge with a T-shaped bracket 8. On both staves 1 and 2 there are provided at least two transversely movable supporting hooks and/or lowering hooks 9. The side supports 12 (Fig. 2) are connected with the staves 1 and 2 by means of studs 11 which fit tightly into the hollow space of the staves 1, 2. An extension 10 of said stud 11 fits into a recess of the support 12. Both parts 10 and 11 may be fastened to the staves and to the supports by rivets 11', or screws or the like. The side supports 12 may consist of profiled or even flat metal. In most cases also wood may be used with advantage. The parts 1, 2 and 12, together with the connecting pieces 10, 11 produce a very rigid frame which does not bend during normal operations and which also cannot be distorted. The brackets 3 are comparatively high so that the slides 4, of which the ends are hook-shaped are provided with a rigid track 30. As the running rails 4', 4'' of the slide 4 extend on edge on the guide bracket 3, the slide 4 takes up very little space, whereby the shaft staves 1, 2 may be made comparatively thin.

The cross-section of the staves 1, 2 may also be modified as is shown in Fig. 9. The side walls of the central part of the staves are slightly bent. A stave with such a cross section and of light metal is very strong.

In Figs. 4 to 8 there is shown that the various side supports can be secured to the staves 1, 2.

In the form of construction in Fig. 4 each side support is formed of a metal profile rod 17. This is provided with slots for the reception of the assembly rails 5.

Fig. 5 shows the securing of the side support 17 to the stave 1 by means of a bar 21 with screwed ends and with nuts thereon. In Fig. 6 the assembly rail 5 rests in a tongue 22 secured to the side support 23. The latter is connected to the staves by any known means.

In the construction in Fig. 7 there is provided the known wire 25 adapted to guide the heddles. Otherwise this construction corresponds with that in Fig. 6.

Fig. 8 shows a construction in which the outer normal side support 27 is reinforced by a flat inner support 24. To this double support is secured the suspension 28. By these suspensions 28 the heddle frame may be moved up and down.

The side supports which are secured to the interconnecting pieces 10, 11 by rivets can be released easily and replaced by longer or shorter ones. Thus existing frames can be converted for other heddle lengths and the frame may be provided with other side supports. In spite of great stability the frame only takes up little space.

The slides 4 shown may also be used in combination with wood bars and riveted T-bars. The end 35 of the slide 4, as shown in Fig. 1, is

bent to correspond to the shape of the ends of the flat assembly rails 5. The parts of the end of the slide 35 correspond in shape with the known shape of the eyes 46 of the flat wire heddle 6. By this construction it is possible for the heddles bearing directly against the slide to extend at a smaller distance apart.

What we claim is:

1. A heddle frame for looms comprising two staves connected by side supports and rigid corner plates, each of said staves comprising a drawn-tubular flat bar element from each longitudinal edge of which extends a bracket of T-shaped cross section integrally formed with the bar element and comprising a web and a head, the outer T-shaped brackets being designed to receive frame supporting hooks, and the inner T-shaped brackets being designed to receive slides for carrying assembly rails on which the heddles may be slidably mounted.

2. A heddle frame composed of a top stave, a bottom stave and side supports, said staves each being formed of a flat hollow body of thin metal continuous in cross section and formed along its top and bottom edges with integral webs and heads defining T-shaped-in-cross-section brackets, studs inserted into the ends of said staves and having extensions that fit in recesses in said side supports, and means rigidly securing said studs and extensions respectively to said staves and side supports, thereby constituting a light, strong frame.

3. A heddle frame composed of a top stave, a bottom stave and side supports, said staves each being formed of a flat hollow body of thin metal continuous in cross section and formed along its top and bottom edges with integral webs and heads defining T-shaped-in-cross-section brackets, studs inserted into the ends of said staves and having extensions that fit in recesses in said side supports, and means rigidly securing said studs and extensions respectively to said staves and side supports, thereby constituting a light, strong frame, combined with frame supporting hooks having portions to grip the outer T-shaped brackets with sliding contact, and slides on the inner T-shaped brackets, and flat assembly rails carried by said slides on which assembly rails heddles are slidably mounted.

4. A heddle frame composed of a top stave, a bottom stave and side supports, said staves each being formed of a flat hollow body of thin metal continuous in cross section and formed along its top and bottom edges with integral single-thickness-of-metal webs and heads defining T-shaped-in-cross-section brackets, studs inserted into the ends of said staves and having extensions that fit in recesses in said side supports, and means rigidly securing said studs and extensions respectively to said staves and side supports, thereby constituting a light, strong frame.

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