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71 Applicant: **VAMATEX S.p.A.**
Via Glera 18
I-24020 Villa di Serio (Bergamo)(IT)

72 Inventor: **Pezzoli, Nello**
Via Monte Grappa, 64
I-24026 Leffe (Bergamo)(IT)

74 Representative: **Vatti, Paolo, Dr. Ing. et al,**
Fumero - Studio Consulenza Brevetti
Widenmayerstrasse 4/I
D-8000 München 22(DE)

54 Heald-guide device for weaving looms.

57 A heald-guide device for weaving looms is formed of at least one pair of round tubes (1,2;11,12), which are at least as long as the healds and which are connected, adjustable both in height and in depth, to the loom side structures (5) and positioned close to the middle point of the stroke of the upper part of the healds (3), bushes (8,9;13,14) being mounted on the healds - coaxial to said tubes and free to rotate - in proximity of the appropriate conventional separators (7,15) provided between each heald.

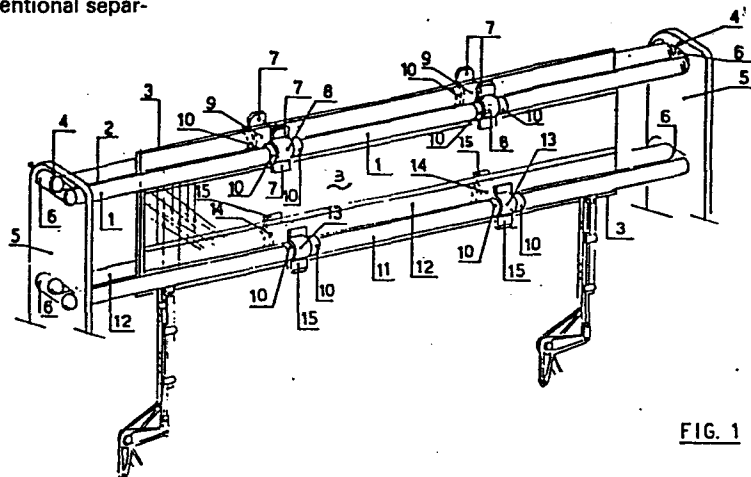


FIG. 1

"HEALD-GUIDE DEVICE FOR WEAVING LOOMS"

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It is known that the solution to the problem of guiding the
healds in weaving looms, in view of the ever increasing speeds of
5 machines, is more and more often found in the construction of
heald-guide devices, which have a complicated structure, involve
high costs and are difficult to use when having to change the
article being worked. The present invention notably reduces these
problems. It in fact relates to a heald-guide structure formed of
10 round tubes, which are at least as long as the healds and which
are connected, adjustable both in height and in depth, to the loom
side structures and positioned close to the middle point of the
stroke of the upper part of the healds, bushes being mounted on
the healds - coaxial to said tubes and free to rotate - in
15 proximity of the appropriate conventional separators provided
between each heald. With this arrangement, the pack of healds is
slung on the upper and/or lower side by said tubes through said
bushes, thereby obtaining a slidable and reliable guide in any
desired zone of the healds. Said guide by no means interferes with
20 any interventions of the operator, in case of break in the warp,
and it does not project vertically from the healds, nor does it
require any intermediate supports, like the known guides. Further-
more, the removal of the rear part of the heald-guide, for loading
and unloading the healds, is carried out without operating under
25 the warp line, by loosening simply two bolts and totally freeing
the rear part of the pack of healds, and it can be performed by a
single person.

The invention is illustrated, by way of example, with
reference to the accompanying drawing, in which:

30 Fig. 1 is a diagrammatic perspective view of the heald-guide
device according to the invention, of which

Fig. 2 is the cross section view with the pack of healds.

With reference to the drawing, it can be seen that the heald-guide according to the invention is formed of a first pair of round tubes 1 and 2, slightly longer than the healds 3 and connected at 4 to the side structures 5 of the loom, with possibility to be adjusted in height (through displacements in respect of the structures 5, see fig. 2) and in depth (through displacement along the slots 6 of the structures 5). The two tubes 1 and 2 are positioned close to the middle point of the stroke of the upper part of the healds 3 and carry, near the heald separators 7, bushes 8 and 9 for engaging said separators. Such bushes are mounted coaxial to the tubes 1 and 2, freely rotating, in positions along the length of the tubes which are set, with possibility of adjustment, by pairs of clamps 10 being removably locked onto the tubes 1 and 2. This mounting of the bushes 8 and 9 allows to easily adapt the heald-guide according to the invention to the most varied types of healds and to the different positions on said healds of the separators 7, with which the bushes are designed to engage.

Figure 1 shows the presence, together with the upper tubes 1 and 2, of a second pair of lower tubes 11 and 12, substantially identical to the first and carrying similar rotating bushes 13 and 14, held by clamps 10 and engaging the lower separators 15 of the healds 3.

With the shown arrangement, the pack of healds 3 is slung both on the upper side and on the lower side by the heald-guides according to the invention. Nevertheless, the progress proposed by the invention can also be obtained by using only the upper heald-guide formed of the tubes 1 and 2, and letting the healds be guided on the lower side by a conventional heald-guide.

The heald-guide according to the invention engages the healds without any slidings (which are always present in corresponding conventional devices), thanks to the rolling contact with

the separators 7 and 15, obtained through the bushes 8, 9 and 13, 14 of the tubes 1, 2 and 11, 12. Furthermore, said heald-guide does not in the least hamper any actions of the operator in the event of breaks in the warp yarn, it does not extend above the
5 healds like all the known heald-guides, nor - like all known heald-guides - does it require any intermediate supports.

As shown in figure 2, the removal of the rear part of the heald-guide according to the invention, for loading and unloading the healds, can be carried out without having to operate under the
10 warp line - as in all the conventional heald-guides - by simply loosening the two bolts 16, and freeing at the back the pack of healds 3 by lifting the rear tube 2. This operation can be carried out by a single person, with the obvious advantages which need not be underlined.

15 It should be noted that equal advantages would be obtained by connecting only the front tube (1, 11) of the heald-guide to the loom structure 5, and by supporting instead the rear tube (2, 12) on the front tube by means of crosspieces or clamps, placed astride of the pack of healds 3.

CLAIMS

5 1) Heald-guide device for weaving looms, characterized in that it is formed of at least one pair of round tubes, which are at least as long as the healds and which are connected, adjustable both in height and in depth, to the loom side structures and positioned close to the middle point of the stroke of the upper part of the healds, bushes being mounted on the healds - coaxial to said tubes and free to rotate - in proximity of the appropriate conventional separators provided between each heald.

10 2) Heald-guide device as in claim 1), wherein said bushes may take up variable positions along said tubes, which are set by pairs of locking clamps.

15 3) Heald-guide device as in claims 1) and 2), wherein two pairs of tubes are provided to sling the pack of healds both on the upper side and on the lower side.

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