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(54) **Pair of weft grippers for looms with interchangeable bottom lining.**

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Description

The present invention concerns improvements in weft grippers for looms.

It is known that the fast progress in the field of looms equipped with weft yarn transport grippers has determined wide changes both in the configuration and structure of said members and in the materials used to produce the same. Among these, plastic materials are successfully used at present.

A drawback of grippers made of plastic material lies in the relatively fast wear of the "ribs" by means of which the grippers engage into the guide elements of the loom and slide in respect thereof, which ribs, having been formed up-to-date as an integrating part of the gripper body, inevitably lead - when worn - to the replacement of the whole gripper.

An example of such a gripper is given in DE - A - 2400166 which discloses detachable means for fixing the gripper 5 to the respective strap 3. To the strap 3 is fixed in one piece, for example by welding, an assembling plate 4. This plate 4 can be fixed, through screw means 10, 12 to the gripper 5. When the sliding sole of the gripper is worn, owing to the friction on the guide elements and on the warp yarns, the whole gripper 5 must be replaced.

The present invention proposes to avoid the above drawback, with obvious economic advantages, by supplying a pair of weft grippers for looms, of the type having ribs engaging with guide elements, wherein ribs are formed on a bottom lining that is replaceably attached to the lower part of said grippers.

Said bottom lining is made of the same plastic material forming the gripper, but is coated with a sheet of composite material consisting of a fabric impregnated with a thermosetting resin, which is applied as an insert into the molded piece directly in the injection mold.

The bottom lining according to the invention is removably applied to the gripper body, and is replaced as soon as the ribs are too worn.

The invention is illustrated on the accompanying drawings which show a practical embodiment thereof and in which:

Fig. 1 is a side view of a carrying gripper according to the invention;

Fig. 2 is a bottom view of the lining applied on the lower part of the body of the gripper shown in figure 1;

Fig. 3 is a section view in an enlarged scale, along the line III-III of fig. 2, of the bottom lining shown in said figure; and

Figs. 4 to 6 are similar views of a drawing gripper according to the invention.

With reference to the drawings, fig. 1 shows a side view of the carrying gripper 1 according to the

invention, to the body 2 of which - fixed to the strap 3 controlling the motion thereof - an interchangeable bottom lining 4 is removably applied by mechanical means (for instance screws).

Said bottom lining consists - as is clearly shown in figs. 2 and 3 - of a shaped slab 5 made of the same plastic material as the gripper and coated with a sheet 6 of composite material consisting of a fabric impregnated with a thermosetting resin. The sheet 6 is applied to the shaped slab 5 as an insert into the molded piece, by being inserted directly in the injection mold and connecting the two parts by mutually engaging portions 7.

The bottom lining 4 is removably applied on the lower part of the gripper 1 by conventional mechanical means, for example - as already mentioned - by means of screws inserted into countersunk holes as 8.

In use, the sides 9 of the bottom lining 4 engage with the metal guide elements of the loom, providing greater resistance to wear, proper to the coating sheet 6, on their side contacting said elements. The warp yarns contact the same coating, also in this case with obvious advantages in view of the rubbing which they produce: wear of the bottom lining, deriving from engagement with the warp yarns, is in fact less than in the conventional grippers, while the surface on which the warp yarns rub remains - by nature - very smooth, with very reduced stresses on said yarns.

In any case, when the wear of the bottom lining 4 reaches unacceptable or inconvenient values, it is sufficient to remove the worn bottom lining and quickly replace it by a new one in order to have a perfectly efficient gripper at one's disposal, with no need to replace the same.

Figs. 5 and 6 show a bottom lining 10 having characteristics fully similar to the bottom lining 4, but to be applied to a drawing gripper 11 as that shown in fig. 4. The other similar parts are marked with the same reference numbers as in the previous figures.

Claims

1. Pair of weft grippers (1, 11) for looms, having ribs (9) engaging with guide elements, characterised in that the ribs (9) are formed on a bottom lining (4) that is replaceably attached to the lower part of said grippers (1, 11).
2. Pair of weft grippers as in claim 1), wherein said bottom lining (4) is made of the same plastic material forming the gripper, but is coated with a sheet (6) of composite material consisting of a fabric impregnated with a thermosetting resin.

3. Pair of weft grippers as in claims 1) and 2), wherein said sheet (6) is applied to the bottom lining (4) as an insert into the molded piece.

(6) est appliquée sur la garniture inférieure (4) en tant qu'élément rapporté dans la pièce moulée.

4. Pair of weft grippers as in claims 1) to 3), wherein said bottom lining (4) is removably applied to the gripper body (2), for instance by means of screws.

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4. Paire d'aiguilles passe-trame selon les revendications 1 à 3, dans laquelle ladite garniture inférieure (4) est appliquée de manière amovible sur le corps d'aiguille (2), par exemple au moyen de vis.

Patentansprüche

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1. Paar von Schußfadengreifern (1, 11) für Webmaschinen, mit mit Führungselementen zusammenwirkenden Rippen (9), dadurch gekennzeichnet, daß die Rippen (9) auf einem Bodenbelag (4) ausgebildet sind, der austauschbar auf dem unteren Teil der Greifer (1, 11) angebracht ist.

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2. Paar von Schußfadengreifern nach Anspruch 1, wobei der Bodenbelag (4) aus demselben Kunststoffmaterial besteht, aus dem die Greifer gebildet sind, jedoch mit einem Blatt (6) aus einem zusammengesetzten Material beschichtet ist, das aus einem mit einem wärmeaushärtenden Harz imprägnierten Gewebe besteht.

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3. Paar von Schußfadengreifern wie in den Ansprüchen 1 und 2, wobei das Blatt (6) auf den Bodenbelag (4) als Einsatz in das geformte Stück aufgebracht ist.

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4. Paar von Schußfadengreifern wie in Anspruch 1-3, wobei der Bodenbelag (4) entfernbar auf dem Greiferkörper (2) aufgebracht ist, beispielsweise mittels Schrauben.

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Revendications

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1. Paire d'aiguilles passe-trame (1, 11) pour métiers à tisser, comportant des rebords (9) engageant des éléments de guidage, caractérisée en ce que les rebords (9) sont formés sur une garniture inférieure (4) qui est fixée de manière amovible sur la partie inférieure des dites aiguilles (1, 11).

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2. Paire d'aiguilles passe-trame selon la revendication 1, dans laquelle ladite garniture inférieure (4) est faite de la même matière plastique que l'aiguille, mais est revêtue d'une feuille (6) de matériau composite consistant en un tissu imprégné d'une résine thermodurcissable.

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3. Paire d'aiguilles passe-trame selon les revendications 1 et 2, dans laquelle ladite feuille



