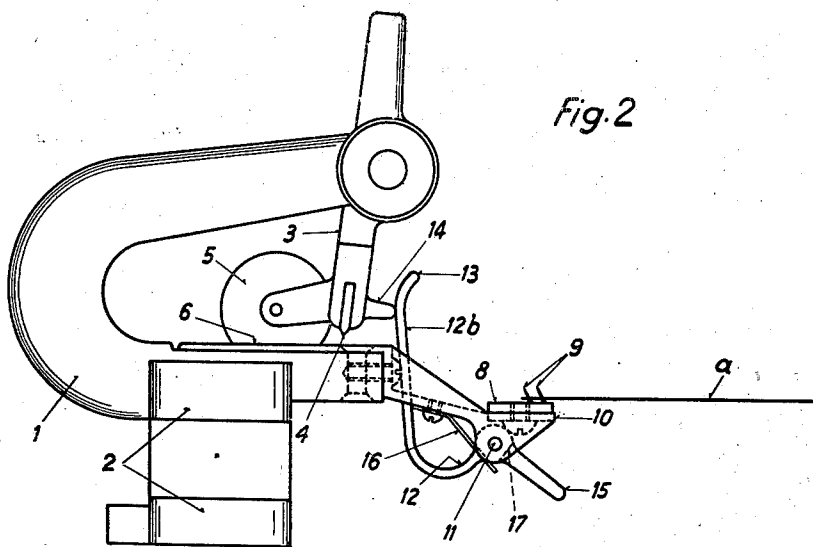
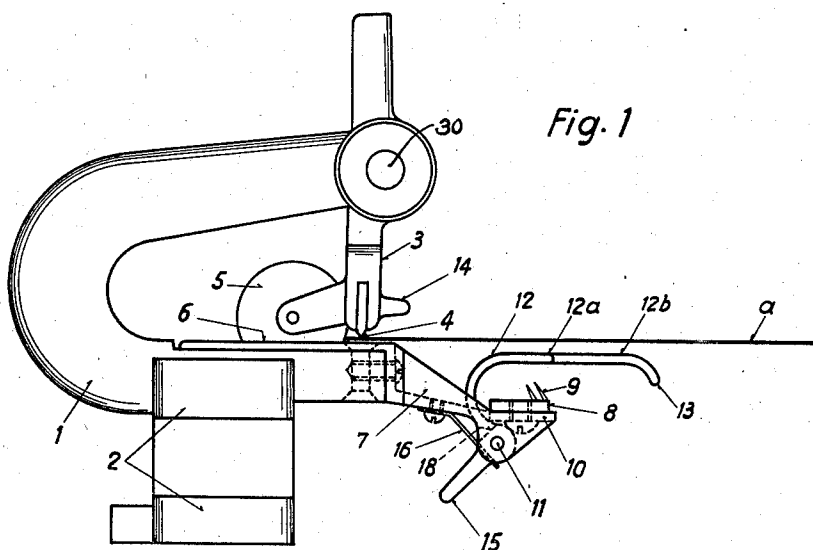


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COMBINED CLIP AND PIN CHAIN LINK
FOR FABRIC STRETCHING MACHINES
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COMBINED CLIP AND PIN CHAIN LINK FOR
FABRIC STRETCHING MACHINES

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5 Claims. (Cl. 26—62)

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The invention relates to improvements in combined clip and pin chain links for fabric stretching machine.

Clip links as parts of a stenter chain are known which are adapted to grip the edges of textile materials, for example fabrics, between a fixed part and a movable part for the purpose of stretching the fabric. The movable part of the clip link is customarily provided with a knife edge for securely engaging the fabric. Furthermore, pin strips are known as parts of a stenter chain in which the edges of the fabric are engaged by the pins for stretching the fabric.

If both devices are combined for optional choice of first the one and then the other stretching means, the following disadvantages are apt to arise:

When the clips are used for stretching, the pin strips are left unguarded and the fabric can easily come into unwanted contact with the pins of the pin strips when the fabric is introduced into the clips and even after the fabric has been inserted into the clip due to small initial tension. The fabric is damaged thereby or a bending of the pins occurs. Furthermore there is the danger that the operator injures his fingers.

When alternately the pin strips are used for stretching, the movable part on the clip link, which for the purpose of its clamping operation is customarily provided with a considerable weight for loading, lies with its sharp knife edge on the clip plate and is lifted somewhat away from the clip plate by the movement of the chain links due to unavoidable vibrations and again falls back on to the same, and so forth. Because of this movement of the movable part of the clip links relative to the clip plate, the sharp knife edge of the movable part is worn off and is soon rendered unsuitable for the purpose of clamping.

These disadvantages of the prior art devices are overcome by the present invention, which relates to a combined clip and pin link for stretching machine for textile material. In accordance with the invention a pin strip is secured on the clip link somewhat below its working plane and on a carrying arm of the clip link, and there is also arranged a rotatable guard arm which when the fabric is stretched by means of the clip, covers the pin strip. When the fabric, however, is stretched by means of the pins the guard arm is rotated upwards and comes out of the way of the textile material and moves the movable clip arm into an inoperative position in which it remains out of contact with the clip plate.

In the drawing there is illustrated by way of

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example a combined clip and pin in accordance with the invention in two different positions of its individual parts in the Figures 1 and 2.

In the drawing 1 indicates the body of the clip link, 2 the connecting lugs with the next link, 3 the movable clip arm rotatable about a pivot 30, 4 its knife edge, 5 its loading weight and 6 the clip plate.

Figure 1 illustrates the manner in which the edge of the fabric *a* is held securely by the clip when the fabric is stretched.

According to the invention there is secured on the body 1 beneath its working plane of the clip plate 6 (the plane of the fabric *a*), on a carrying arm 7, a pin strip 8 with pins 9, secured for example on a ledge 10, and there is a guard arm 12 arranged rotatable about a pivot 11, which arm, when the fabric is stretched by means of the clip, covers the pin strip 8. When the fabric is stretched by means of the pins 9, however, the arm 12 is turned upwards (position Figure 2) and thereby moves the movable clip arm 3 into an inoperative position away from the clip plate 6. In the illustrated construction, the guard arm 12 consists of two parts 12a and 12b, of which the one part 12a is only of a length as necessary to cover the pin strip, while the other part 12b is longer and is adapted to engage the movable clip arm 3 with a bent portion 13 which also covers the pin strip from the inner side of the fabric.

The arm 12b in its raised position engages preferably a projection 14 on the movable clip arm 3.

A control member 15 is provided on the guard arm 12 by means of which the raising and lowering of the guard arm by hand is made possible from a position outside the vicinity of the pin strip 8. A spring device, for example a leaf spring 16, is provided which locks the guard arm 12 in its two alternate working positions and allows it to be brought from one position into the other when the control member 15 is actuated. For this purpose two flat surfaces are arranged on the guard arm 12 as shown at 17 and 18 and against which the spring 16 is adapted to bear.

In the device according to the invention the parts of the clip, when idle, are protected against wear and do not damage the fabric and the pins of the pin strip, when not in use, are guarded and prevent injury to the fingers of the operator.

What I wish to secure by Letters Patent is:

1. A combined clip and pin link for fabric stretching machines, including a link body provided with a clip plate and a movable clip arm

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having a clamping edge rotatably supported by said body above said clip plate, a carrying arm on said link body below the working plane of said clip plate, a pin strip secured to said carrying arm, a guard arm rotatably arranged so as to cover the pin strip when stretching the fabric by means of said clip plate and clip arm, and adapted to be rotated into an inoperative position when stretching the fabric by means of the pin strip, said guard arm in its inoperative position engaging the movable clip arm and holding the latter out of engagement with the clip plate.

2. A combined clip and pin link as claimed in claim 1, including a control member on the guard arm for moving the guard arm from its operative position to its inoperative position and vice versa.

3. A combined clip and pin link as claimed in claim 1, in which the guard arm is provided with two flat faces and including spring means adapted to engage either flat face in the two selectively adjustable positions of said guard arm for lockingly holding the guard arm in the selected position.

4. A combined clip and pin link as claimed in claim 1, in which the guard arm is provided with

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two flat faces and including a leaf spring adapted to engage either flat face in the two selectively adjustable positions of said guard arm for lockingly holding the guard arm in the selected position.

5. A combined clip and pin link as claimed in claim 1 in which said guard arm consists of parts of which one covers substantially only the pin strip, while the other part is adapted to engage the rotatable clip arm and is provided with a bent outer portion which extends over the pin strip toward the inner side of the fabric.

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