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**SELECTION DEVICE FOR A MINI-JACQUARD
KNITTING MACHINE**

5 The invention relates to a mini-jacquard knitting machine and more particularly to the selection device which enables different patterns and structures of fabric to be produced on the same machine.

10 Jacquard design is one of the most important categories in circular knitting machines because, with today's higher standard of living, demand for high quality fabric such as jacquard is growing rapidly. Jacquard machines have the unique flexibility of being
15 able to produce various types of fabric relatively economically, with specially designed fabric patterns and structures, to satisfy varying consumers' needs, even though the demand volume is often low.

20 Consequently, the selection device is one of the most critical components in a mini-jacquard knitting machine. As the market requirement for jacquard fabric structures is very volatile, the mini-jacquard knitting machines must be readily changed to knit a
25 different fabric pattern and structure. Therefore, the selection setting in the selection device must be easily changed to generate the desired position of the knitting needles. To achieve this, the selection device must be easy to use, reliable and durable.

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 The conventional selection mechanisms have a number of disadvantages. Three major disadvantages are:

 1) difficulty in replacing the worn selection
35 pressers,

2) inaccuracy in the selection mechanism,
arising from the difficulty in tolerancing control
during fabrication, and the damage to components
caused by repeated use, and

5 3) difficulty in production due to complexity
of the design.

The present invention provides a selection device
for a mini-jacquard knitting machine comprising a body
10 which is detachably mountable on a knitting machine
and has a plurality of parallel grooves formed on its
exterior surface, and a number of selection pressers
engageable in the grooves at a number of different
positions to change alternative fabric patterns.

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The invention has eliminated the three
disadvantages mentioned above and provides an easy to
use, reliable and durable selection mechanism for
knitting machines. It adopts only one type of
20 selection presser to achieve three different knitting
positions, that are miss, knit and tuck. This feature
has greatly avoided the confusion in use, reduced
number of spare parts and cost. Furthermore, the
high-precision production processes of the selection
25 device and its components has greatly enhanced its
reliability and ensured unmistakable needle selection.

The invention will now be described in detail, by
way of example only, with reference to the
30 accompanying drawings in which:

Figure 1 is a sectional side view of a selection
device in accordance with the present invention;

Figure 2 is a sectional plan view of the device
35 of Figure 1;

Figure 3 is an enlarged view of the catch mechanism employed in the selection device shown in Figure 2.

5 The selection device of the present invention comprises a selection device holder 10 which in use is secured to a mini-jacquard knitting machine (not shown). A lock plate 11 is releasably secured to the selection device holder 10 by means of screws 12. A
10 selection device 13 and a handle 14 are secured to the lock plate 11. The positioning of the selection device 13 within the holder 10 is precisely controlled by the contact surfaces between the body 13 and the holder 10, as well as between the lock plate 11 and
15 the holder 10.

 A series of parallel grooves 15 is formed on external surfaces of the selection device 13. A number of selection pressers 16 are engaged within
20 various ones of the grooves 15 and tightly retained in the grooves 15 by means of a catch mechanism 17 shown in Figure 3. The catch mechanism 17 consists of a projection on the selection presser 16 which engages behind a shoulder 18, formed on selection device 13.

25 In order to alter the set-up of the knitting machine to produce a different fabric pattern, the position of the selection pressers 16 in the grooves 15 must be altered. To do this, the lock plate 11,
30 selection device 13 and selection pressers 16 are removed as a unit from the selection device holder 10. The handle 14 provided on the lock plate 11 facilitates handling of this unit.

35 Once the unit has been removed from the holder

10, the selection pressers 16 are removed from the grooves 15 and replaced in a new position engaging a different desired set of grooves 15. The unit is then replaced in the holder 10 and operation of the
5 knitting machine can be resumed to produce a fabric of a different pattern.

Thus, use of a single type of selection presser makes the selection device of the present invention simple
10 to produce and use.



CLAIMS:

1. A selection device for a mini-jacquard
knitting machine, comprising a body which is
5 detachably mountable on a knitting machine and has a
plurality of parallel grooves formed on its exterior
surface, and a number of selection pressers engageable
in the grooves at a number of different positions to
change alternative fabric patterns.
- 10 2. A selection device as claimed in claim 1,
further comprising a lock plate to which the body is
secured and a holder to which the lock plate is
removably securable.
- 15 3. A selection device as claimed in any
preceding claim further comprising catch means to
releasably secure the selection pressers in position
in the grooves.

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