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TECHNOLOGY OF OBTAINING COMBINED INTERLOCK JERSEY

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Abstract:
Interlock (two-swallow) weave - an eraser derivative is a combination of two erasers connected to each other in such a way that in the spaces between the loop columns of one eraser the loops of the other are placed

Keywords: Interlock, loop columns

Interlock (two-swallow) weave - an eraser derivative is a combination of two erasers connected to each other in such a way that in the spaces between the loop columns of one eraser the loops of the other are placed (Fig. 1). [1]. One loop row of interleavingis formed by two binding systems:

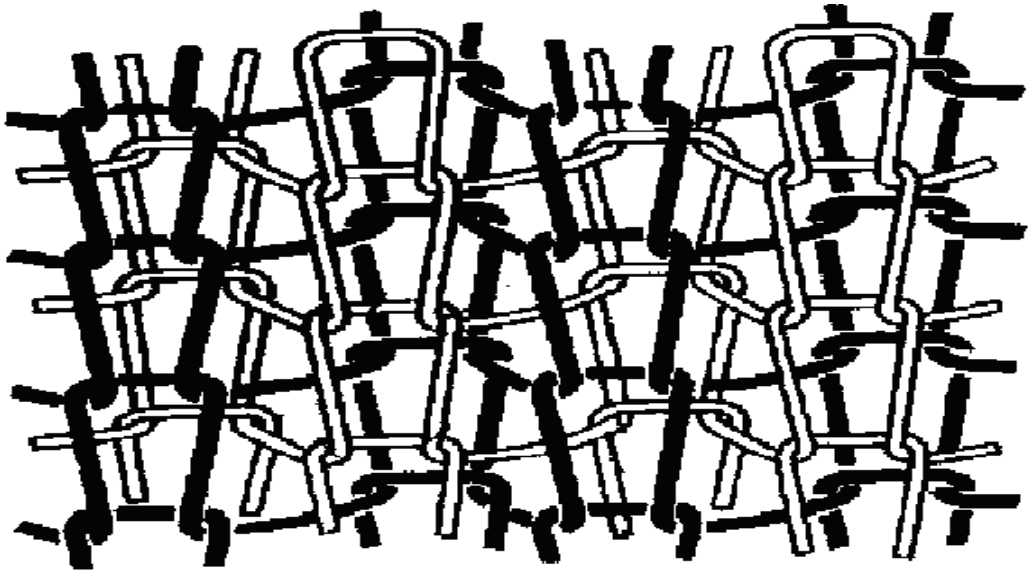

Fig.1.
Structure of interlock knitwear.

A well-worn interlock knitwear with high shape resistance is known, on both sides of which all the loops are inside out (Fig. 2) [2]. In the works of Prof. V.A. Zinoviev, much research is devoted to the development of balanced structures of knitwear, increasing its form resistance [3-4].

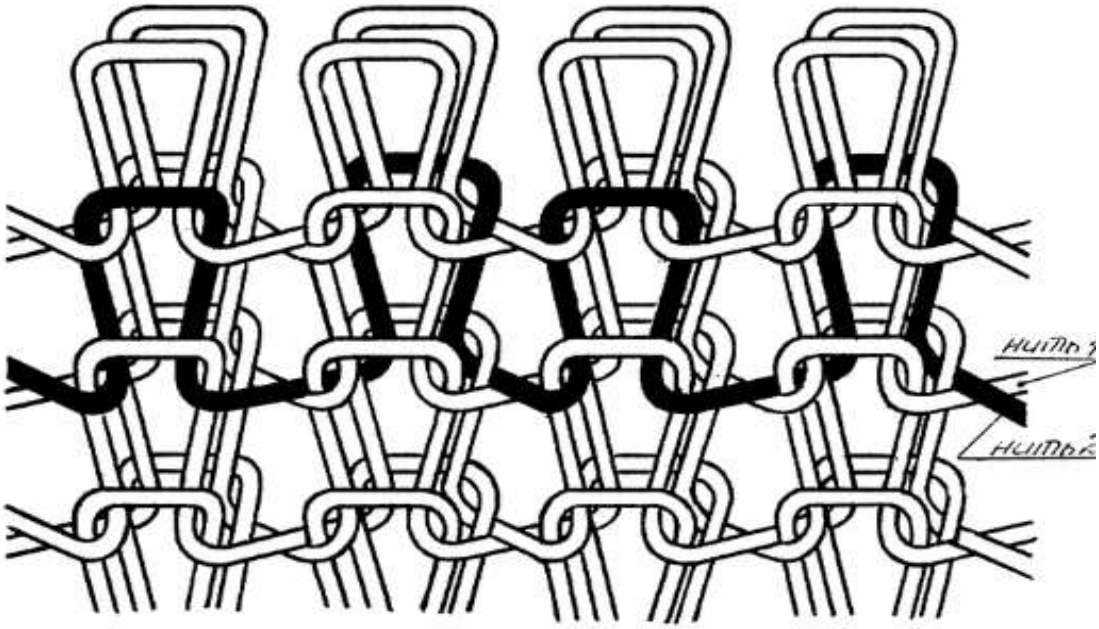

Fig.2.
The structure of the wear-out knitwear

Its disadvantage is the technological impossibility of obtaining such a structure in the 2000s on knitting equipment, but todayandthe technological inthepossibility of knitting machines Long Xing 252 allowed to develop this type of knitwear in the laboratory of the Department of "Knitting Technologies" at NamMTI .

In the work [5] to expand the range of knitwear, the structure of a new combined interlock knitwear has been developed.

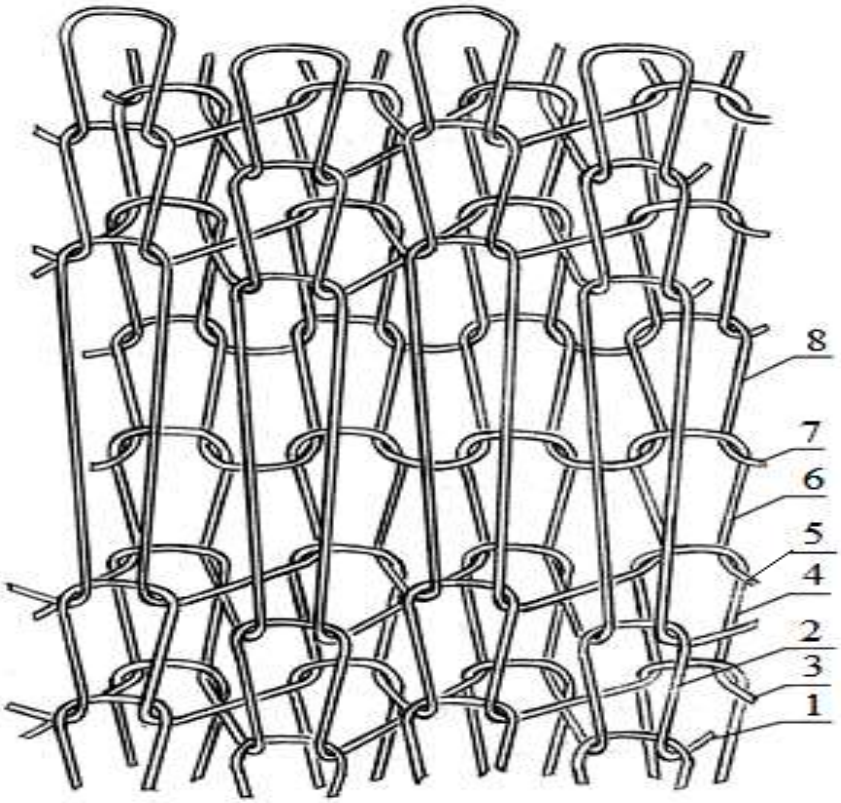

Fig.3
Structure of combined interlock knitwear.

The combined knitwear (Fig.3.) contains a thread 1, from which loops 2 of one eraser are tied, a thread 3, from which loops 4 of another eraser are tied, and a thread 5, from which loops of 6 of the wrong row are tied and a thread 7, from which loops 8 of the next base row are tied.

Method of obtaining k ocombined interlock threequotes offer agyas developsywat on a three-font round knitting machine (Fig. 4.)

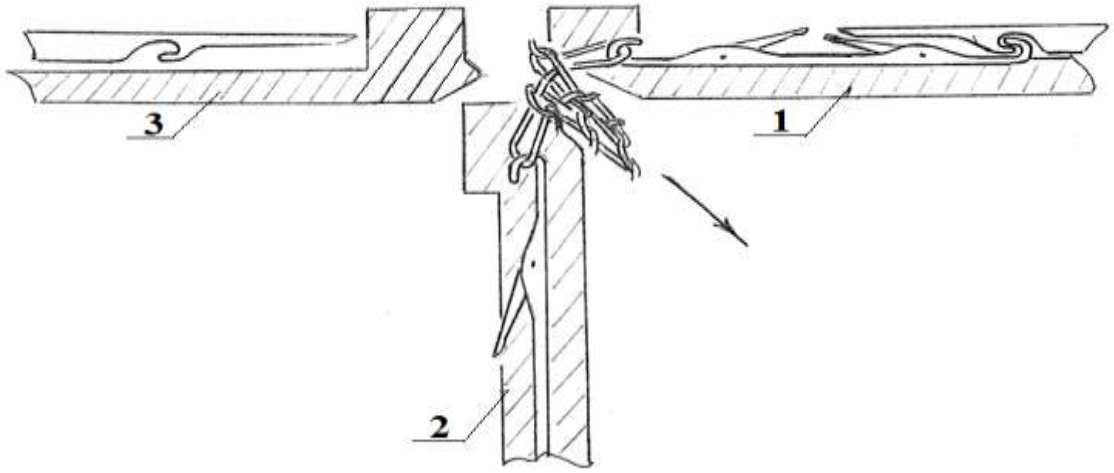

Fig.4.
Mutual arrangement of needle holders to a three-font machine.

Combined knitwear on a round knitting machine is obtained as follows.

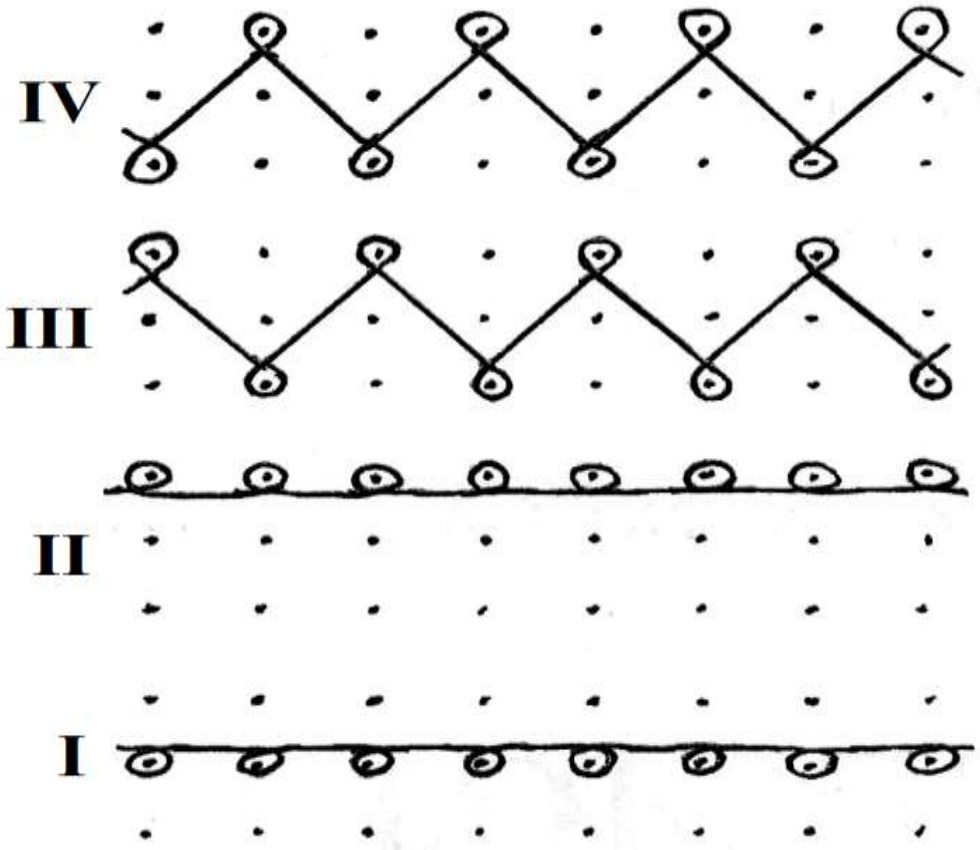

Fig.5.
Graphic recording of combined knitwear.

According tothe graphic recordand (Fig. 5), it can be seen that in the first system, a loop row of the underside surface is tied on all the needles of needle 1 (Fig. 4, 5).

In the second system, the needles of the needle 1 are transferred to the needle 3 and the loop row of the underside surface is tied, i.e. one front row and one inside row are formed.

In the third system, the needles of the needle 1, 2 tie one eraser row (Fig. 4,5).

To form a whisker row, the needles of the needle 1, 2 work through one, i.e. the even needles of the needle 2 work with the odd needles of the needle 1. In the fourth system, the needles of the needle 1, 2 also work through one, i.e. the odd needles of the needle 2 work with the even needles of the needle 1 and form one eraser row.

Thus, in the first and second system, one rapport of the wear knitwear is formed, and in the third and fourth system, the needle system of the needles of the needle 1, 2 are tied with a series of two-blastic knitwear.

However, thismethod of obtaining a combined interlock knitwear on a three-track round knitting machine is impossible to implement, since a round-knitted three-font machine has not yet been created.

In the works [6-20] to improve the hygienic properties and expand the range of knitted products, new structures and methods of producing knitwear have been developed

To expand the range of outerwear made of knitwear, as well as to improve the quality of the produced knitwear, scientists of the Department of Knitwear Technologists of NamMTI have developed a structure and a method for obtainingme combined with internal knitwear with improved hygienic properties.

In the combined knitwear of the new structure, containing two layers of hinges and connecting elements in the form of broaches, the rapport of the weave consists of alternating rows of the underside derivative of the surface and the inside of the interlocking series, which improves the physical and mechanical properties of the knitwear by increasing the shape resistance, heat-shielding properties and resistance to abrasion.

Combined knitwear was developed on a flat knitting machine of the "Long Xing 252" model of the laboratory of the Department of Knitwear Technologies of NamMTI. It is important to note that on modern round-knitted transfer machines, the technological capabilities of the equipment make it easy to develop this type of knitwear without changing the design of the machines.

Pis .6. shows the structure of the combined interlock knitwear of the new structure. The graphic record of the weave is shownin Fig. 7.

As can be seen from Fig. 6. The resulting jersey consists of front Li and inside II interlocking rows. It is known that interlock knitwear has the greatest form resistance. The combination of the interlocking series with the inside interlacing improves the shape stability compared to the inside-out interlock knitwear.

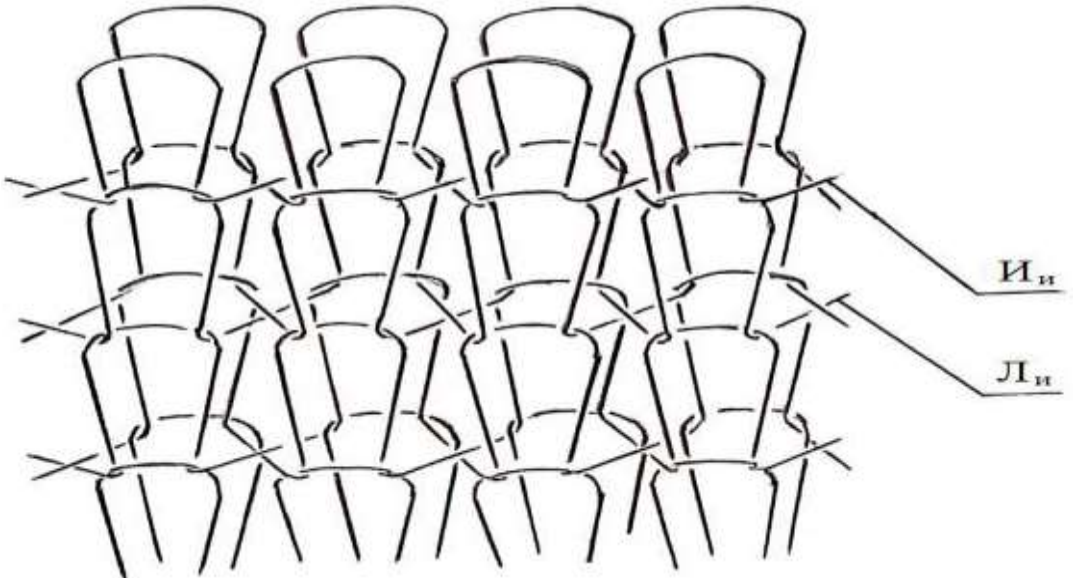

Fig.6.

Structure of combined interlock knitwear

The combined knitting of the interlockingweave of the new structure on a flat knitting machine is obtained as follows.

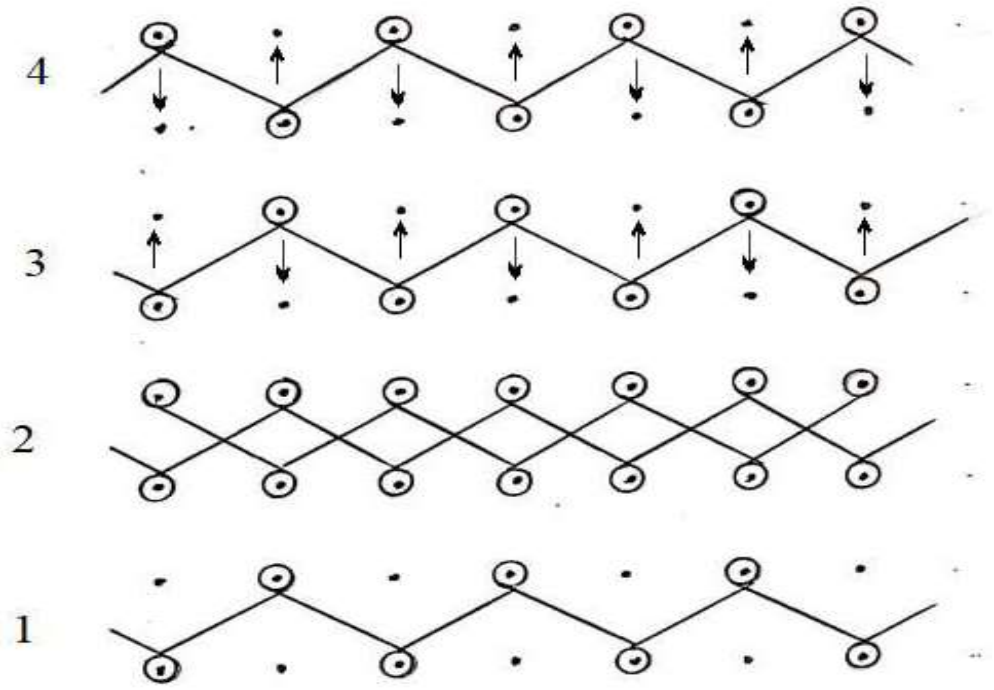

Fig.7.

Graphic recording.

In Fig.7, the 1st and 2nd rows are formed by interlacing, then in the 3rd and 4th rows the loop rows are transferred alternately from one needle to another. This is given by the alternation of the front and back interlock rows in the rapport of knitwear. The development of this knitwear does not require a constructive change in the machine, for the formation of one rapport of the combined interlock knitwear of the new structure, two strokes of the loop-forming system are needed. Due to the simplicity of production, the productivity of the machine is practically not reduced, the technological capabilities of knitting machines are expanded.

The proposed combined knitted interlock weave has a beautiful appearance and improved physical and mechanical properties, namely an increase in shape resistance, heat-shielding properties and abrasion resistance, which is achieved by combining the front and back interlock rows in rapport.

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