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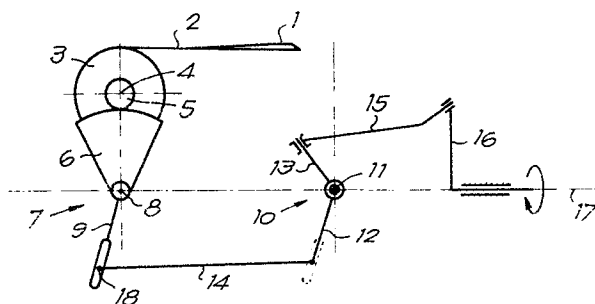
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⑤④ **Drive mechanism for the smallware gripper of a loom.**

⑤⑦ This driving mechanism is of the type wherein the band (2) of the gripper (1) is driven by means of a wheel (3) the axis (4) of which is perpendicular to the direction of the driving shaft (17) of the weaving loom, whereby the aforesaid wheel (3) is driven from this driving shaft (17), via a spatial crank mechanism, by means of a toothed sector (6) and a pinion (5) fixed to the wheel (3), characterized in that the aforesaid toothed sector (6) constitutes one end of a first pivoting body (7) the other end of which is connected by means of a connecting rod (14) with one end of a second pivoting body (10) the other end of which is a part of the aforesaid spatial crank mechanism.



"Driving mechanism for a woof-gripper mounted on a band in a weaving loom"

The present invention relates to a driving mechanism for a woof-gripper mounted on a band in a weaving loom, hereinafter sometimes called "woof-gripper" or sometimes simply "gripper".

- 5 In weaving looms equipped with woof-grippers mounted on a band the bands are usually each driven by means of a wheel carrying a pinion with which a toothed sector is in mesh. To the latter an oscillatory motion is transmitted from a driving shaft of the weaving loom, by means of a suitable transmission allowing
10 to convert the rotatory motion of a shaft into an oscillatory motion and to transmit the latter to another shaft the direction of which is perpendicular to the one of the first named shaft.
- 15 Now, on a weaving loom equipped with woof-grippers mounted on a band it must be possible to adapt the travel of the grippers to the chosen weaving breadth. For this reason, one has already proposed, amongst others, to change a spatial crank mechanism so that the position of the driving-point on the crank be
20 adjustable in relation to either the driving shaft or the driven shaft (German Patent Application No 30 29642).

The drawback of such a system is the fact that the displacement of the aforesaid driving-point results in a displacement of
25 both the end positions of the grippers. In a weaving loom with

feed grippers and taking-over grippers this means that the taking-over cannot take place correctly or can absolutely not take place. In this case it is necessary to move at least one of the bands in relation to its drive pinion, which takes time.

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The object of the invention is to avoid this drawback and at the same time to provide a device with which an ideal cinematic law is obtained for the gripper.

- 10 This is achieved according to the invention, in a weaving loom in which the band of the gripper is driven by means of a wheel the axis of which is perpendicular to the direction of the driving shaft of the loom, whereby the aforesaid wheel is driven from this driving shaft, via a spatial crank mechanism,
15 by means of a toothed sector and pinion fixed on the wheel, due to the fact that the aforesaid toothed sector constitutes one end of a first pivoting body the other end of which is connected by means of a connecting rod with one end of a second pivoting body the other end of which constitutes a part of the
20 aforesaid spatial crank mechanism.

For greater clarity, an embodiment of the invention will be described hereinunder, reference being made to the annexed schematic drawing.

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- The gripper 1 is fixed on one end of a band 2 which can be driven by its drive-wheel 3. A pinion 5, which is in mesh with a toothed sector 6, is fixed on the shaft 4 of wheel 3. The toothed sector 6 is a part of a first pivoting body 7 which can
30 rotate around shaft 8. The other part of body 7 is constituted by a lever 9.

A second pivoting body 10 is mounted on shaft 11 and consists of a double lever 12 and 13.

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The levers 9 and 12 are both hinged and connected the one with

the other by means of a rod 14.

Lever 13 is a part of a spatial crank mechanism which, furthermore, consists of the transmission component 15 and a crank 16
5 which is fixed on the driving-shaft 17.

It should be noted that the axes 8 and 11, on one hand, and axis 17, on the other hand, are crossing one another at right angles. One end at least, for instance 18, of the connecting
10 rod 14 is adjustably connected with the corresponding lever, for instance 9.

To change the geometrical relations of the system, it suffices to shift the point of fixation of the end 18.
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The system is designed in such a way that for each adjustment of the end 18, one of the two end positions of sector 6 remains unchanged and that this unchanged position corresponds to the taking-over position of the gripper 1.
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The device according to the invention allows to obtain a fairly ideal cinematic law for the gripper 1, characterized by a short travel time of the gripper in the tissue without an excessive load of the loom and by a limited feeding speed of the woof
25 thread.

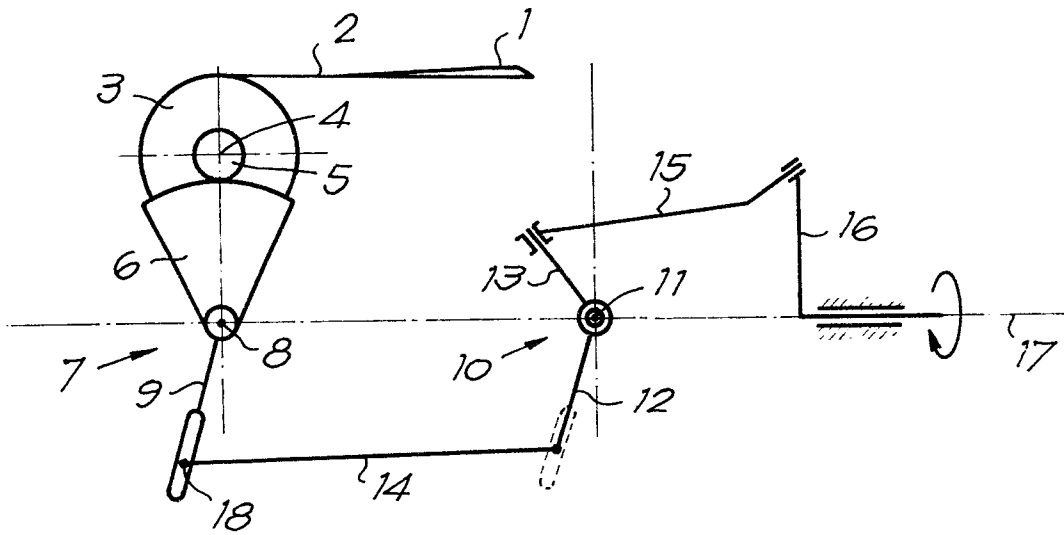
It goes without saying that many variants of execution of the invention are possible, within the frame of the following claims.

Claims.

- 1.- Driving mechanism for a woof-gripper mounted on a band in a weaving loom, of the type wherein the band (2) of the gripper
5 (1) is being driven by means of a wheel (3) the axis (4) of which is perpendicular to the direction of the driving shaft (17) of the loom, whereby the aforesaid wheel (3) is being driven from this driving shaft (17) via a spatial crank mechanism, by means of a toothed sector (6) and pinion (5) fixed to
10 the wheel (3), characterized in that the aforesaid toothed sector (6) constitutes one end of a first pivoting body (7) the other end of which is connected by means of a connecting rod (14) with one end of a second pivoting body (10) the other end of which is a part of the aforesaid spatial crank mechanism.
15
- 2.- Driving mechanism according to claim 1, characterized in that the aforesaid pivoting bodies (7,10) are separately mounted, crossing the driving shaft (17) at right angles.
- 20 3.- Driving mechanism according to claim 1, characterized in that one end at least of the aforesaid connecting rod (14) is adjustably connected with the corresponding pivoting body.
- 4.- Driving mechanism according to claim 3, characterized in
25 that, for each adjustment of the aforesaid end of the connecting rod (14), one of the end positions of the toothed sector (6) remains unchanged, whereby this end position corresponds to the taking-over position of the gripper.

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EUROPEAN SEARCH REPORT

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Application number

EP 82 20 1111

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
A	DE-B-1 535 666 (SCHEFFEL) * figure 1 *	1	D 03 D 47/12
A	DE-A-2 628 690 (INGENIERIA APLICADA) * figure * & GB - A - 1554775	1	
A	DE-U-7 908 124 (DORNIER) * figure 1 *	1	
A	GB-A-1 404 126 (INCOTEX) * figure *	1	
D, A	DE-A-3 029 642 (RÜTI) * figure * & FR - A - 2463215	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			D 03 D 47/00
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 26-11-1982	Examiner KLITSCH G

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
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D : document cited in the application
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