

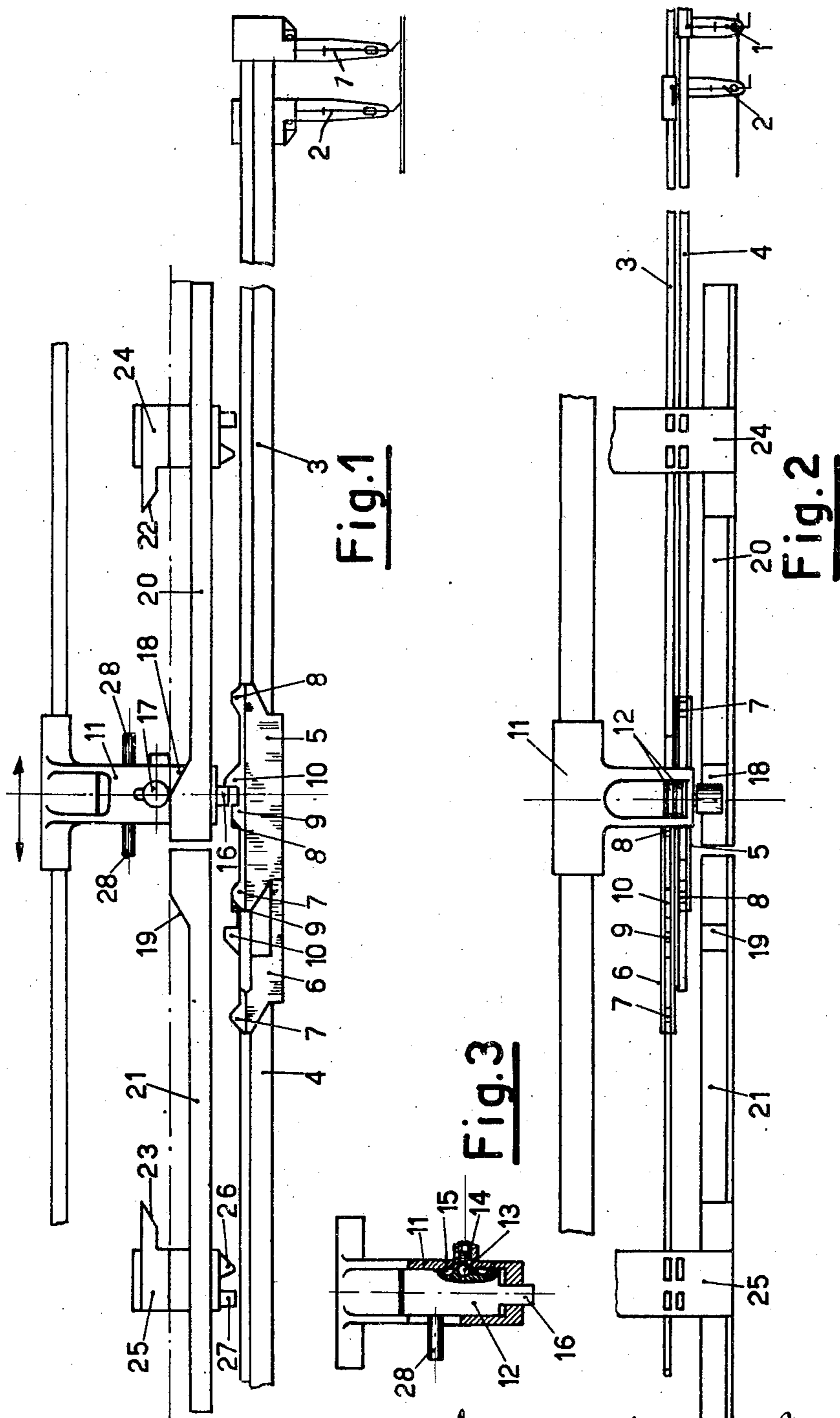
Oct. 25, 1949.

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2,485,917

DRIVE FOR PLATING CARRIERS IN KNITTING MACHINES

Filed Dec. 31, 1947



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## UNITED STATES PATENT OFFICE

2,485,917

DRIVE FOR PLATING CARRIERS IN  
KNITTING MACHINESUbaldo Pianta, Milan, Italy, assignor to firm So-  
cietà Italiana Ernesto Breda Per Costruzioni  
Meccaniche, Milan, ItalyApplication December 31, 1947, Serial No. 794,837  
In Italy December 31, 1946

1 Claim. (Cl. 66—129)

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The device according to this invention is intended to drive the displacement of the plating carriers, which are employed for reinforcing the heels of stockings and like hosiery goods, on ordinary knitting machines, in particular of the "Cotton" type.

Said displacement is now obtained, on the already known looms of the abovestated type, by means of braking devices, by which the carrier is stopped at the end of its travel, or by means of other more or less complicated devices.

According to this invention, a device has been designed, by which same purpose is attained through different means, with the aim to obtain a remarkably simple structure and a working accuracy higher than that obtained on the machines heretofore employed, together with a possibly higher working speed, without mechanical troubles and without interfering with the good knitting action.

In the device according to this invention, the carrier rods are driven by a reciprocating gear, comprising at least one member which is moved transversely with respect to said rods, due to a reaction against inclined surfaces, which do not partake in said motion, so as to allow said member to engage with or disengage from the carrier rods.

In the accompanying drawing is diagrammatically shown, only by way of a not restrictive example, an embodiment form of the device according to this invention. In same drawing:

Fig. 1 is a front view of the device.

Fig. 2 is a plan view of same device.

Fig. 3 is a section along two perpendicular planes of the displacement driving gear.

On the drawing, 1 and 2 are the plating carriers, with the corresponding rods 4 and 3. On said rods are respectively secured the toothed pieces 5 and 6 which, as it can be noticed from the drawing, are provided with three teeth 7, 8 and 9 and a fourth longer tooth 10.

Said pieces 5 and 6 are set in motion by the member 11, provided with a sliding piece 12, which can be locked in three pre-established positions by means of the little ball 13 which, under the action of a spring 14, engages into one of the recesses 15, machined on the piece 12; this latter piece shows a projecting tail 16, which engages, according to its position, with the teeth 7, 8, 9, 10.

Said piece 12 is firmly secured to the shaft of the roller 17 which, during its travel, engages with the inclined surfaces 18 and 19 of the guides 20 and 21, and with the inclined surfaces 22 and 23 machined on the pieces 24 and 25, in conse-

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quence of which the device in question operates in the following manner: In the position shown by the drawing, the piece 11 is moved from right to left; the roller 17 has been lifted from the surface 18, and consequently the tail 16 has been disengaged by the tooth 9 of the piece 5, which is kept still in the position shown by the drawing; together with this latter piece the rod 3 and the carrier 1 are kept still.

During the further motion of the piece 11, the tail 16 comes upon the tooth 10 of the piece 6, which is therefore brought to the left together with the rod 4 and the carrier 2, until the tooth 7, engaging the retractable point 26 of the piece 25, after having elastically lifted same point, is stopped against the stop 27.

In the meantime the roller 17, by coming upon the surface 23, is brought down, causing the tail 16 to fall between the teeth 9 and 10 of the piece 6, which in such a manner is brought to the right together with the rod 4 and the carrier 2, while the piece 11 is travelling back to the right. During said back travel, the roller 17 meets the surface 19, by which it is lifted, while the tail 16 is disengaged from the piece 6, on account of which the piece 5 performs then the aforescribed motion in a wholly symmetrical manner.

As it will be noticed from Figs. 1 and 3, the piece 12 is provided with two bosses 28, which allow to displace same piece even by hand, bringing it, when desired, in a third even higher position, so as to bring it out of action of the tail 16, thus bringing the plating carrier out of action.

The tooth 7 of the piece 5 and the tooth 8 of the piece 6 do not perform any work, and are foreseen with the only purpose to make the pieces 5 and 6 alike whereby they can be manufactured more cheaply.

It will be understood that the constructional details of the device according to this invention, have been shown in a wholly diagrammatical manner and only by way of example, on account of which many variants and practical means, well known to all experts of the art, are to be considered as embraced within the scope of this invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

A device for driving the plating carriers in straight bar knitting machines, comprising in combination a piece reciprocating parallel to carrier rods of such machine, which move longitudinally forwardly and backwardly, said piece bear-

ing a member displaceable transversely to said carrier rods, pieces not partaking in the movement of the carrier rods and provided with inclined surfaces engaging said transversely displaceable member, pieces fixed on the carrier rods provided with teeth of different heights engaging said transversely displaceable member for a determined transversal position of the latter, whereby said carrier rods are dragged by said reciprocating piece for strokes determined by the position of said inclined surfaces.

UBALDO PIANTA.

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