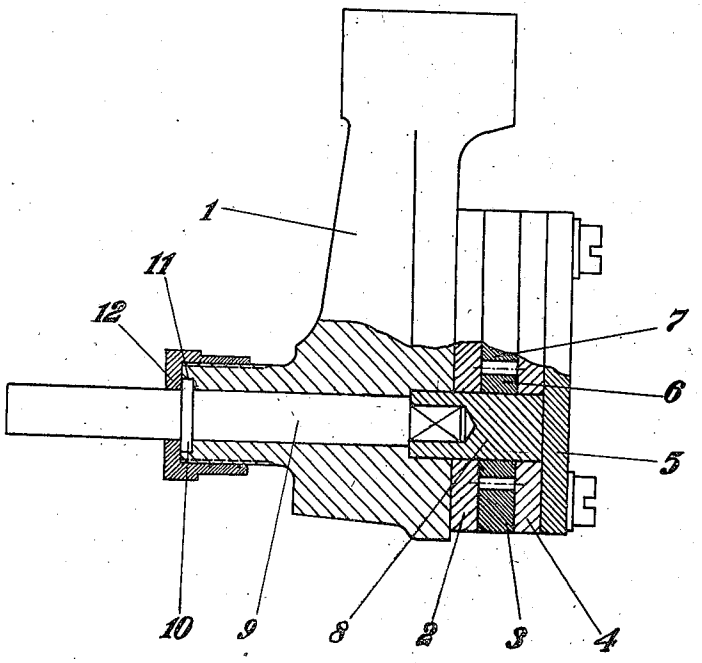
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GEAR SPINNING PUMP

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by [illegible]

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GEAR SPINNING PUMP

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1 Claim. (Cl. 103—126)

This invention relates to a gear pump for delivering spinning solution to artificial silk spinning machines. It is known in such pumps to provide the driving shaft with a collar and to journal the same in a bore in the clamping element. This collar is, however, provided on the inner side of the clamping element between the same and the front plate of the pump in order to thus prevent the spinning solution from entering the bearing of the driving shaft and a hardening of this solution by inflowing air. Experience has shown that in the arrangement referred to spinning solution still penetrates into the bearing. Moreover a separate lubrication is necessary for the driving shaft, which adds to the cost of the pump. The pump must be dismantled for the removing of the driving shaft because the collar of the shaft is arranged within the pump. It is also known to utilize the spinning solution for lubricating the driving shaft and to close the bearing at its outer side by means of a stuffing box.

The present invention consists in arranging the recess designed to accommodate the collar of the driving shaft on the outer side of the clamping element and to cover this recess for example with a cap nut without stuffing box, to hold the collar.

By this arrangement the bearing of the driving shaft is lubricated by the spinning solution, but a stuffing box is omitted and nevertheless any air admission is excluded. The driving shaft can be removed after unscrewing the cap nut without dismantling of the pump, which represents a considerable simplification.

An embodiment of the invention is illustrated by way of example in the only figure of the accompanying drawing which shows a pump partly in side elevation and partly in section.

The pump, comprising a clamping element 1 and pump plates 2, 3, 4 and 5, carries in its interior the gears 6 and 7, the driving gear 6 being mounted on a short shaft 8 coupled with the driving shaft 9. The bearing for the driving shaft in the clamping element 1 is lubricated by the spinning solution. The shaft 9 has a collar 10, which fits in a recess 11 in the clamping element and is held in position by a cap nut 12. The collar 10 prevents air from coming into contact with the spinning solution.

I claim:—

A gear spinning pump, comprising in combination, a clamping element having a lateral extension with a bearing bore in the clamping element extending from a point adjacent the inner end of the clamping element through the lateral extension, said bore being of constant diameter throughout its length, the outer end of the clamping element extension having an annular recess therein surrounding the bearing bore, pump plates on the inner side of said clamping element, an intermeshing driving gear and driven gear arranged between said plates, a short shaft mounted in said plates and carrying said driving gear, a driving shaft dimensioned for journalled mounting in the bearing bore of said clamping element and lateral extension and coupled at its inner end with said short shaft, the other end of the shaft projecting outwardly of the extension, a collar rigid with the driving shaft and fitting in said annular recess and a cap nut surrounding the outer projecting end of the shaft and screwed onto said lateral extension to maintain said collar in said recess whereby the spinning solution may flow through the bearing bore for lubricating the driving shaft and said collar acting to prevent the escape of spinning fluid at the outer end of the lateral extension and preventing ingress of air at the outer end of the lateral extension.

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