Aug. 8, 1933.

J. W. NASMITH

1,921,203

COMBING MACHINE

Filed April 23, 1932

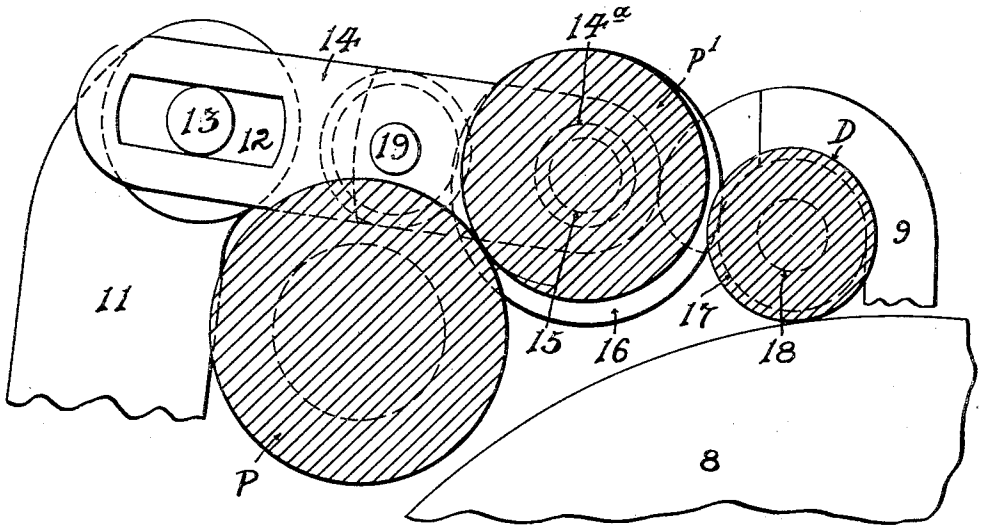


Fig: 1.

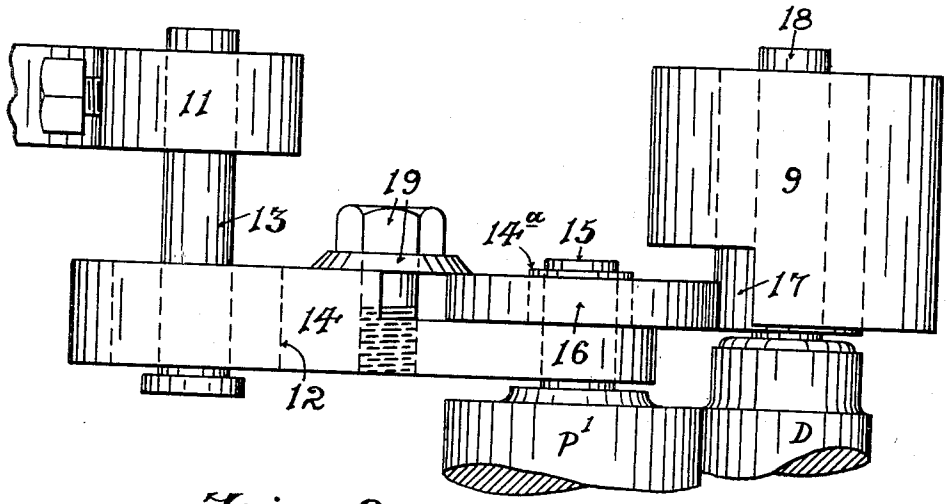


Fig: 2.

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1,921,203

COMBING MACHINE

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2 Claims. (Cl. 19—121)

In the specification of United States Letters Patent No. 1,828,377 granted to me there is described and illustrated an assemblage of rollers in a combing machine for textile fibres, wherein a detaching roller makes intermittent contact with a combing cylinder segment to form a detaching nip, and also moves during detaching towards the machine nipper, its movements to and from the said nipper being followed by an upper piecing roller which rolls upon a lower piecing roller. The detaching roller is at all times out of contact with both piecing rollers, but close adjacency of the said detaching roller to the lower piecing roller ensures that these two rollers shall clean or clear each other.

The present invention relates to improvements in combing machines having such a construction of piecing and detaching rollers, and which machines will be referred to hereinafter as "combing machines of the type referred to", and has for object to provide a simple means whereby the detaching roller and the upper piecing roller which move together to and from the machine nipper may at all times during their movement preserve a substantially constant adjustable distance from each other. For this purpose and in accordance with the invention in a combing machine of the type referred to, the upper piecing roller and the detaching roller moving together as stated, the upper piecing roller shaft is supported from the detaching roller shaft and at an adjustable distance therefrom.

As the detaching roller shaft supports the upper piecing roller shaft and thus supports the roller, it is sufficient to mount the said shaft in bearings in loose connections or links which are loose upon suitable arms to permit the roller to roll upon the lower piecing roller during its movement with the detaching roller.

The annexed drawing illustrates by way of example a practical method of mounting the upper piecing roller so that it will, whilst rolling around the lower piecing roller, be supported by the detaching roller, together with a simple means of adjustment of the distance between the latter and the upper piecing roller. In the figures of the drawing, 1 is a side elevation and Figure 2 a plan of so much of the combing machine as is necessary for adequate explanation. Only one side is shown; it will be understood that the roller bearings and other accessories shown are duplicated on the other side of the roller assembly.

In the drawing one of the arms 11 described and shown in the prior specification 1,828,377 is shown fragmentarily; D is the detaching roller; 8 the combing cylinder segment; and P^1 the upper and P the lower piecing rollers, all as in the said prior specification. By these present improvements the upper piecing roller P^1 is hinged or linked to two arms 11 by means of a stud 13 in each such arm slidably engaging slot 12 in a link 14 the other end of which has a bearing for the neck 15 of the shaft of the upper piecing roller P^1. Upon a boss of bearing 14a for roller neck 15 is fitted, in such a manner as to be angularly adjustable, a flat metal disc 16 which is eccentric to the axis of the roller P^1 and which disc rests by its periphery upon a bush 17 on a neck 18 of the shaft of the detaching roller D as shown, clamping screw and washer 19 serving by making tight contact with the face of the disc 16 to retain the latter in any position to which it may be adjusted, and the extent of such adjustment will regulate with a high degree of accuracy and nicety the distance between the neck 18 of roller D and the neck 15 of roller P^1, and therefore the distance between the surfaces of these two rollers.

A weight hook for the detaching roller D is indicated at 9, and this hook is cut away as seen in Figure 2, to permit contact of the bush 17 upon the neck 18 of the detaching roller D and the periphery of the disc 16.

In the drawing the detaching roller D and the upper piecing roller P^1 are at their nearest point of approach to the machine nipper, arm 11 and detaching roller D having moved together, in the manner described in the prior specification, to the right. Due to the hinged or linked connection of arm 11 and link 14 the upper piecing roller P^1 has rolled upon the lower piecing roller P but has been throughout supported by the bush 17 on the neck 18 of the detaching roller D through the disc 16, and it remains so supported on the return movement of itself and the detaching roller D.

It will be understood that changes may be made in the mechanical details of the invention as to the slidable mounting of the links 14 and the adjustment of means for supporting the piecing roller from the detaching roller so that these two rollers will reciprocate together, whilst remaining at all times in constant adjusted bodily relation.

I claim:—

1. In a combing machine a detaching roller and a piecing roller, these two rollers reciprocating together in the operation of the machine, slidable arms in which the piecing roller is borne, angu-

larly adjustable discs fitted upon the piecing roller shaft and eccentric thereto, such discs resting upon the detaching roller shaft, and means for securing such discs in any angularly adjusted position thereof.

2. In a combing machine a detaching roller and a piecing roller, these two rollers reciprocating together in the operation of the machine, slidable arms in which the piecing roller is borne, discs upon the piecing roller shaft which discs rest upon the detaching roller shaft and are eccentric to the piecing roller shaft and angularly adjustable thereon, and a clamp engaging and holding a disc at any angularly adjusted position thereof.

JOHN WILLIAM NASMITH.