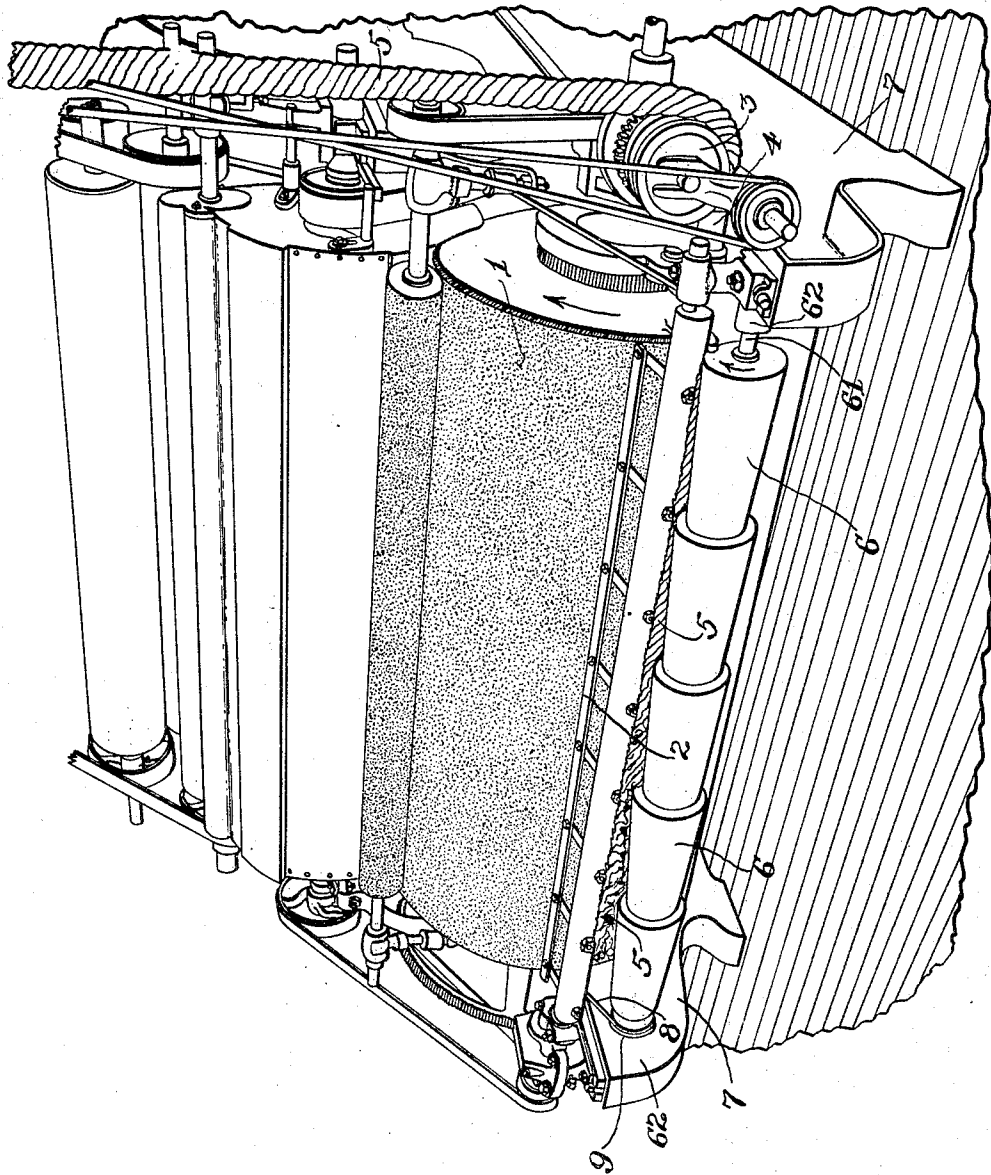


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ATTACHMENT FOR CARDING MACHINES

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ATTACHMENT FOR CARDING MACHINES.

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The invention is applicable to carding machines of the class having side delivery rolls at one end of the doffer, to which rolls the fleece or sliver stripped from the doffer by means of the usual vibrating doffer knife passes after going through a rotating condenser tube.

It is usual to provide such carding machines with means for supporting the fleece or sliver as it falls from the doffer, and during its travel transversely of the machine toward the condenser tube and side delivery rolls. The present invention comprises an improvement in such means. The gist of the invention consists in a fleece or sliver support composed of a series of frustro-conical roll-sections disposed end to end lengthwise of the doffer, with the small end of one such section at the large end of the next adjoining section, and so on throughout the series.

An illustrative embodiment of the invention is shown in the drawing applied at the front of a carding machine, the view being in perspective.

In the drawing the doffer is marked 1, the vibrating doffer knife being marked 2, the side-delivery roll mechanism being marked 3, and the rotating condenser tube being shown partly at 4. At 5 is indicated fleece or sliver which has been stripped from the doffer by the action of the doffer knife. Such fleece or sliver is mostly concealed by the rockshaft of the doffer knife. It is indicated as occupying the space or interval between the surface of the doffer and the surfaces of the frustro-conical roll-sections 6, 6. At the delivery side of the side-delivery rolls 3 the fleece or sliver is shown as extending upward from the delivery rolls 3 on its way to the overhead guide arrangement (not shown) by which it is conducted to the succeeding carding machine.

Referring now to the illustrated embodiment of the invention itself: The frustro-conical roll-sections 6, 6, are disposed in line with one another in a series extending lengthwise of the doffer with the small end of one roll-section at the large end of the adjoining roll-section and so on throughout the series, as previously mentioned. In the present instance the said frustro-conical roll-sections are carried by a shaft 61 which is mounted in bearings 62, 62, upon the oppo-

site side-frames 7, 7, of the machine. The frustro-conical roll-sections are rotated in the same direction as the doffer by means of a belt 8 which passes around a pulley (not shown) in connection with the doffer and also around a pulley 9 which is connected fixedly with shaft 61 and the series of roll-sections. It is to be noted that the increase in diameter of the respective frustro-conical roll-sections is in the direction toward the condenser tube and delivery-roll arrangement. The peripheries of the large ends of the frustro-conical roll-sections are fairly close to the periphery of the doffer.

The fleece or sliver, as it is stripped from the doffer by the doffer knife, falls down into the space between the frustro-conical roll-sections and the doffer and is supported by the said roll-sections. By the turning of the frustro-conical roll-sections over toward the doffer-surface such portions of the fleece or sliver as may float frontward over the said roll-sections is carried rearward toward the doffer, so that all of the fleece or sliver becomes gathered together in consequence of the rotation of the condenser tube. The larger diameters of the frustro-conical roll-sections support the fleece or sliver at intervals across the face of the doffer sufficiently close to one another to prevent the fleece or sliver from dropping through between the said roll-sections and the doffer. The conical shape of the respective sections assists in feeding the fleece or sliver transversely of the machine toward the condenser tube 4 and side-delivery arrangement 3, the feeding action being repeated by each frustro-conical roll-section in succession.

In the practical utilization of the principles of the invention, the constructional features of the series of frustro-conical roll-sections, their supporting means, and their driving means, may be varied to meet practical requirements and according to the views of the maker.

What is claimed as the invention is:—

1. In a carding machine, the combination with the doffer, means for stripping the fleece therefrom, and side-delivery mechanism, of a series of rotating fleece-supporting frustro-conical roll-sections disposed end to end lengthwise of the doffer, with the small end of one thereof at the large end of

the next adjoining, and so on throughout the series.

2. In a carding machine, the combination with the doffer, means for stripping the fleece therefrom, and side-delivery mechanism, of a series of fleece-supporting frustro-conical roll-sections extending end to end

lengthwise of the doffer, with the small end of one thereof at the large end of the next adjoining, and so on throughout the series, a supporting shaft for said series, and means for rotating the series. 10

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