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SUPPORT FOR STRIKE-OFF MEANS ON DOUGH-ROLLING MACHINES

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3 Claims. (Cl. 107—12)

The present invention relates to a support for strike-off means on dough-rolling machines, in which at least one strike-off unit bridges a gap between a conveyor belt running over a roller and a lower cylinder and contacts the surface of said roller by a strike-off edge.

The invention springs from the task of so adapting such a strike-off support that the different thicknesses of conveyor belts used may be taken into account and accommodated, and that the strike-off unit will be readily removable, as is necessary for many operations such as for cleaning the strike-off unit and the cylinder surface contacted by the strike-off blade in operation.

According to the present invention said task shall be solved by mounting the strike-off unit at both ends vertically reciprocable and rotatable in guides and suspending it through arms from spring means. Further, hold-down means adjustable in height and capable of being rendered inactive for the purpose of removing the strike-off means are arranged to bear above on said end of the strike-off element and to press the strike-off edge on to the cylinder surface in coaction with said spring means.

In a preferred form of the present invention on dough-rolling machines, in which also at least one strike-off element contacts an upper cylinder through its strike-off edge, said element through journals provided at its ends is supported in stationary bearing seats and is connected to said spring means by arms secured to said ends.

Said hold-down means are preferably mounted on eccentric rings disposed on the stems of screws secured in the machine housing portions and comprising a shoulder by which said rings through rubber gaskets prevent the hold-down means from rotation when said screws have been tightened.

One form of the invention is shown by way of example in the drawing in which,

FIG. 1 is a vertical section in a plane standing normal to the axes of rotation of the two cylinders, the strike-off elements and the parts interconnecting same having been removed at one side of said cylinders; and

FIG. 2 shows a section on the broken line II—II of FIG. 1.

In the drawing, 1 denotes the upper settable cylinder of a dough-rolling machine and 2 the lower cylinder that is rotatable about a stationary axle. Numeral 3 denotes one of two belt-driving rolls disposed on either side of the lower cylinder 2, while 4 denotes one of two conveyor belts which runs over the roll 3 and an idler (not shown). Numeral 5 denotes a portion of two housings situated at the two ends of the cylinders 1 and 2 and rigidly interconnected by rods or links.

Upper cylinder 1 is contacted by two strike-off elements 6 (only the left one being shown) of which each comprises a round bar 7 and a strike-off blade 8 rigidly inserted in a longitudinal slot of the latter. The lower cylinder 2 is contacted by two strike-off elements 9 (again only the left one being shown) of which each comprises a bell-crank bar 10 and a strike-off blade 25 which is rigidly inserted in a longitudinal slot of bar 10.

Round bar 7 of the upper strike-off unit 6 comprises at both ends of a shouldered pin 7a that carries an arm 11 rigidly secured thereto and is supported in a seat 12a

which consists of a semi-cylindrical extension of a sleeve 12 rigidly inserted in an adjacent housing portion 5; an axial dislocation of round bar 7 or of strike-off element 6 is prevented by the arms 11 through their exterior end faces abutting against adjacent end faces 13 of the sleeves 12.

Bar 10 of each lower strike-off element 9 at both ends comprises a journal 10a to which is rigidly secured an arm 14 and which in a guide 15 is movable up and down and pivotable at an angle to the vertical; said guide 15 being constituted by a slot in a strike-off bearing 16 pressed home in a bore 17 of the adjacent housing portion 5.

The outer ends of the arms 11, 14 at each end of the two cylinders 1, 2 are interconnected by a spring assembly 18. Each assembly 18 comprises an upper bar 18a pivoted to arm 11 and fixed to a depending sleeve 18b, and a lower bar 18c of which the lower end is pivoted to arm 14 and movable in sleeve 18b, and finally a compression spring 19 inserted between a collar of bar 18c and a crimped or flanged edge of sleeve 18b.

At the two ends of the cylinders a screw 20 is screwed into a blind threaded hole of the adjacent housing portion 5, and on the stem 20a of said screw are mounted a washer 22 and a ring 21. The latter has a shouldered portion 21a of which the cylindrical exterior surface is eccentrically offset with respect to the bore. On said portion 21a is rotatably mounted one end of a hold-down bail 23 disposed between said bail and the shoulder 21a of ring 21.

In the operative position shown of hold-down bail 23, the latter with its upper nose 23a is situated above guide slot 15 and bears from above on the respective journal 10a of the lower strike-off element 10 to thereby determine the elevation of element 10. Bail 23 at the same time through the spring assembly 18 acting on arm 14, urges strike-off edge 9b against the surface of lower cylinder 2; and the top side of strike-off unit 10 then bridges the gap between the adjacent belt-driving roller 3 or conveyor belt 4 and the cylinder surface just mentioned. Spring assembly 18 at the same time biases arm 11 of upper strike-off unit 6 of which the blade edge 6a is pressed against the surface of upper cylinder 1, irrespective of the elevations or setting of the latter.

It may be pointed out yet that at both ends of a pair of strike-off units 6, 9 is effective a device 11, 14, 18 and that at both these ends also is provided a hold-down bail 23. The elevation of the bails 23 may be adjusted by turning the rings 21 after having slackened the screws 20. To such end the rings comprise radial bores 21b into which a tool is insertable.

When it is desired to remove the two strike-off units 6, 9 together with the two devices 11, 14, 18 interconnecting same, the hold-down bails 23 with their noses 23a are pivoted out of the range of lower strike-off unit 9, without slackening the screws 20, whereupon the two units 6, 9 and the devices 11, 14, 18 are lifted off. Then not only the strike-off units but also the cylinder surfaces can be readily cleaned.

I claim:

1. In a support for strike-off means on dough-rolling machines, in which at least one strike-off unit bridges a gap between a conveyor band running over a roller and a lower cylinder and through a strike-off edge abuts against the surface of said cylinder, the improvement comprising spring assemblies and arms connected thereto, said strike-off unit being mounted at both ends in guide slots to be movable up and down and pivotable and suspended on said arms from said spring assemblies, and hold-down bails adjustable in elevation and capable of being rendered ineffective for the purpose of removing said strike-off unit, said bails bearing above on the ends of said strike-off unit and in cooperation with said spring assem-

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blies urging the strike-off edge against the cylinder surface.

2. A support for strike-off means on dough-rolling machines, as set forth in claim 1 in which at least one strike-off unit through its strike-off edge abuts against an upper cylinder also, the further improvement comprising stationary bearing seats for journals provided at the ends of said unit, and arms secured to said ends to connect said unit to said spring assemblies.

3. A support as set forth in claim 1, in which the hold-down bails are mounted on eccentric rings which are disposed on the stems of screws driven into machine-housing

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portions and of which each comprises a shoulder to prevent said hold-down bails through rubber gaskets from turning when the screws have been tightened.

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