FIG. 1

FIG. 2

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BY

ATTORNEYS
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3,092,238
TRAY FOR MIXING MILLS
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The invention relates to an improved tray for mixing mills.

Trays are provided under the rolls of mixing mills, e.g., in the rubber and plastics industries, in order to collect the fillers falling through the nip during the mixing procedure. During the incorporation of fillers in powder form, the main work of the mill operator consists in sweeping these fillers forward together in the tray and to feed them again by means of a shovel. This sweeping must be carried out while the operator is in a very stooped position and is consequently very tiring and time-wasting. For this reason, it has already been proposed to install under the rolls a so-called "collector" in the form of a wide conveyer belt which replaces the tray in collecting the fillers which have fallen through the nip and, conveys these fillers upwardly into the mill nip again at the back roll. However, this arrangement has not proved satisfactory for various reasons and has not been exploited.

The present invention consists in that the tray of mixing mills is constructed as a vibratory conveyer and the fillers falling through the nip are constantly conveyed forwards into a collecting channel, from which they can easily be picked up by means of a shovel and re-fed. The tray forms with the vibrator an assembly which can easily be moved in and out and which can be fixed in the operating position by clamping screws. The current is supplied by cables and plugs. The tray itself is advantageously made of polished stainless steel (V2A) sheeting.

FIG. 1 is an end elevation of the device.
FIG. 2 is a side elevation of the device.

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The invention is illustrated in the accompanying diagrammatic drawing. The tray 1 is set in vibration by means of a vibrator 2 and the fillers which have fallen through the mill nip 3 are conveyed into the collecting channel 4. The assembly is locked in the operating position by the clamping screws 5, but can easily be moved out on the wheels 6 after releasing said screws.

We claim:

1. In a combination with a mixing mill having horizontally positioned mill rollers, a transversely extending tray mounted on a carriage for oscillatory movement with respect thereto, said tray and carriage being adapted to be inserted in the confined space directly beneath the rollers of said mixing mill, said tray having means defining a collecting channel at one end thereof, drive means for imparting oscillations to said tray causing it to carry out said oscillatory movements whereby material falling through the nip of said rollers is deposited on said tray and is conveyed therealong to said collecting channel for removal.

2. A combination according to claim 1, wherein said carriage is supported on wheels.

3. A combination according to claim 1, including means for maintaining said carriage in fixed position when in actual use.

4. A combination according to claim 3, wherein said fixing means are clamping screws.

5. A combination according to claim 1, wherein said tray is pivotally supported upon said carriage.

6. A combination according to claim 1, wherein said tray is connected to said carriage by means of rods, said rods being pivotally connected at one end thereof to said carriage and at the other end thereof to said tray.

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