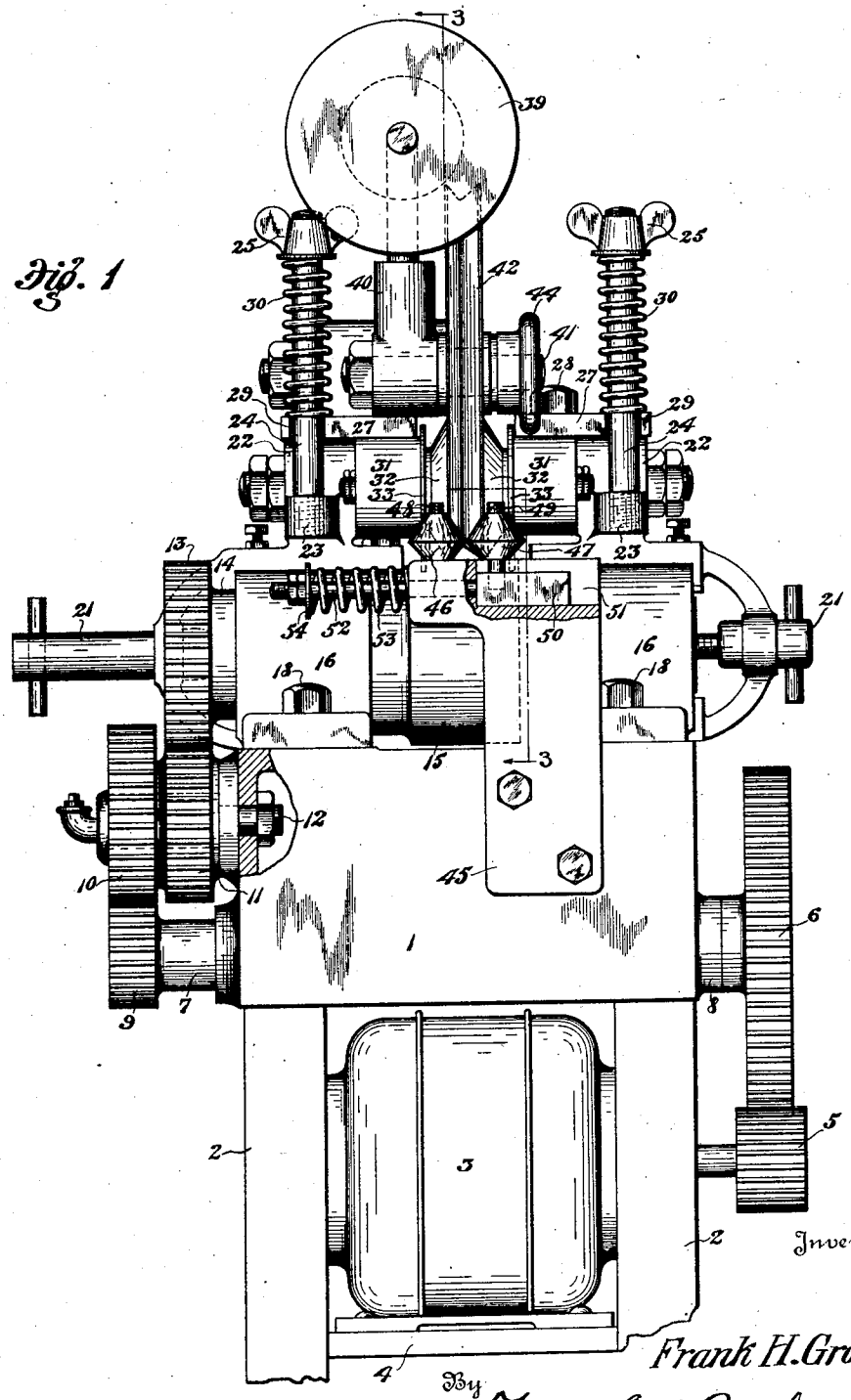
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F. H. GROVE

BEAD TRIMMER

Filed March 13, 1922 3 Sheets-Sheet 1

Fig. 1



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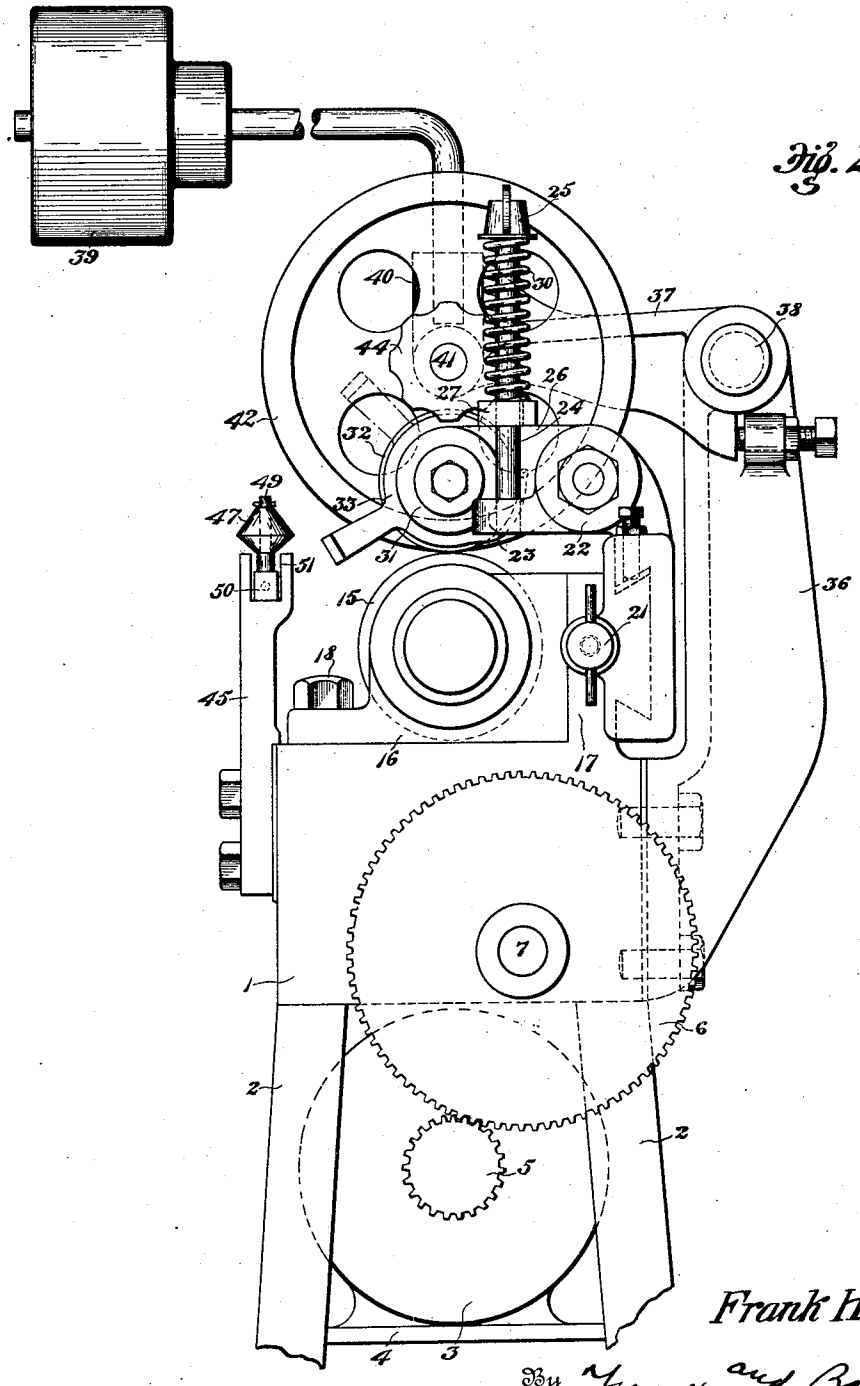
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Fig. 2



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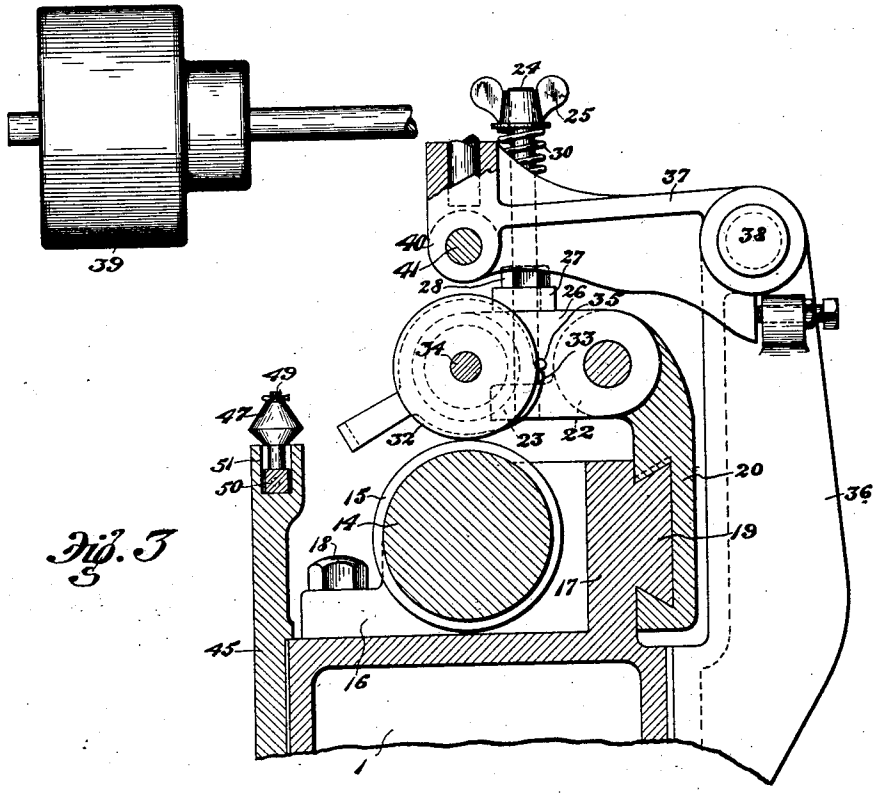


Fig. 3

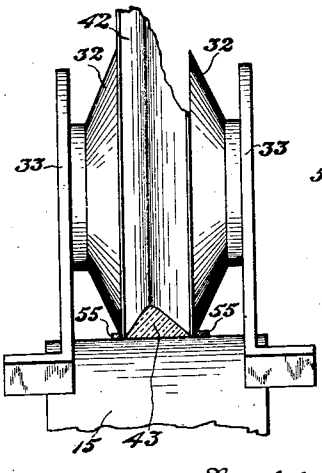


Fig. 4

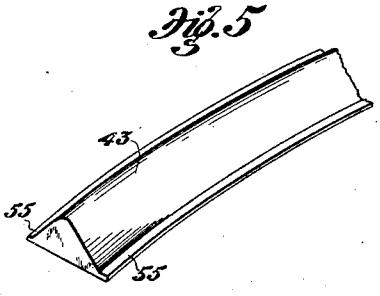


Fig. 5

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UNITED STATES PATENT OFFICE.

FRANK H. GROVE, OF COLUMBIANA, OHIO.

BEAD TRIMMER.

Application filed March 13, 1922. Serial No. 543,446.

This invention relates to bead trimmers and has more especial reference to a device designed to accurately trim the edges of the rubber bead strips used in the construction of pneumatic tire casings.

In forming the rubber bead strips, a fin is usually formed upon each side of the strip and the objects of the present invention are to provide means for quickly and accurately trimming these fins from the strip.

The above and other objects may be attained by providing a device such as illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a bead trimming device embodying the invention, parts being broken away for the purpose of illustration;

Fig. 2, a side elevation of the same;

Fig. 3, a section approximately on the line 3—3, Fig. 1;

Fig. 4, a fragmentary elevation of the cutting disks, showing portions of the guide roll and drive roll; and

Fig. 5, a fragmentary perspective of a portion of a bead strip before trimming.

Similar numerals refer to similar parts throughout the drawings.

The device includes a housing or frame 1, mounted upon the supports 2, the motor 3 being supported therein beneath the frame as by the shelf 4. A pinion 5 upon the motor shaft meshes with the gear 6 mounted upon a shaft 7 journaled in suitable bearings 8 provided in the housing 1 and provided at its opposite end with a pinion 9 which meshes with the gear 10 formed integral with a pinion 11 and journaled upon the stud shaft 12.

The pinion 11 meshes with a gear 13 upon the neck 14 of the drive roll 15. The drive roll is journaled in bearings 16 located upon the top of the frame 1 and against the rear wall 17 thereof, being attached to the frame as by the screws 18.

A dovetailed guideway 19 is formed upon the rear side of the wall 17, upon which is mounted a pair of sliding blocks 20, each of which is adjustable upon the guideway by means of an adjusting screw 21.

Each of the blocks 20 has at its upper end, a forwardly projecting bearing portion 22, a lug 23 protruding forwardly from the lower side thereof, a vertical rod 24 being carried thereby and extending upwardly and provided at its upper threaded end with a thumb nut 25.

A bearing bracket 26 is journaled upon each of the bearing members 22, a plate 27 being connected to the upper surface of each bracket as by a screw 28, and provided with a slot 29 which accommodates the adjacent rod 24. A coil spring 30 is located around each rod 24 between the thumb nut thereon and the plate 29, tending to normally urge the bracket 26 downward.

Each of the brackets 26 is provided at its forward end with the bearing 31 upon which is journaled a cutting disk 32, an eccentric 33 being mounted upon the shaft 34 of the disk 32 and arranged to be normally located in the position shown in Fig. 3, engaging the stop pin 35 and allowing the cutting disk to engage the roll 15.

A bracket 36 is supported upon the rear side of the frame 1, the frame 37 being hinged to the upper end thereof as it 38, said frame being provided with a counterweight 39 and with the bearing 40 within which is located the shaft 41 upon which the guide wheel 42 is journaled.

The peripheral contour of the guide wheel conforms to the bead strip 43 and it will be understood that the guide wheel may be replaced by another having a different contour to accommodate any cross sectional shape of bead strip. The guide wheel may be easily removed from its shaft by removal of the nut 44.

A bracket 45 is mounted upon the forward side of the frame and provided with the guiding rollers 46 and 47, the roller 46 being journaled upon a fixed post 48, the roll 47 being journaled upon a post 49 which is mounted in the slidable plunger 50 located in the channel portion 51 of the bracket and provided with the reduced shank 52 extending through one side of the bracket, a coil spring 53 being interposed between the end of the bracket and the collar 54 upon the shank for normally urging the roller 47 toward the roller 46.

In operating the device, the bead strip 43 is passed between the guide rollers 46 and 47 and between the guide wheel 42 and the

feed roller 15, the cutting disk 32 severing the fins 55 from the bead strip, as shown in Fig. 4.

I claim:—

1. A bead trimmer including a frame, a cylindrical drive roll mounted therein, a pair of spaced cutting disks engaging the periphery of the drive roll, and means for passing the bead strip between the cutting disks and drive roll, means for moving the cutting disks laterally and an eccentric adjacent to each cutting disk for raising the same out of engagement with the drive roll.

2. A bead trimmer including a rotatable cylindrical drive roll, a pair of spaced cutting disks engaging the periphery of the drive roll and pressure means for holding the peripheral cutting edges of the disks against the drive roll.

3. A bead trimmer including a frame, a cylindrical drive roll mounted therein, a pair of spaced cutting disks engaging the periphery of the drive roll, means for passing the bead strip between the cutting disks and drive roll, means for moving the cutting disks laterally and means adjacent to each cutting disk for raising the same out of engagement with the drive roll.

FRANK H. GROVE.