

April 23, 1963

R. A. WENTZ
DRUM TUMBLER

3,086,332

Filed Feb. 15, 1961

2 Sheets-Sheet 1

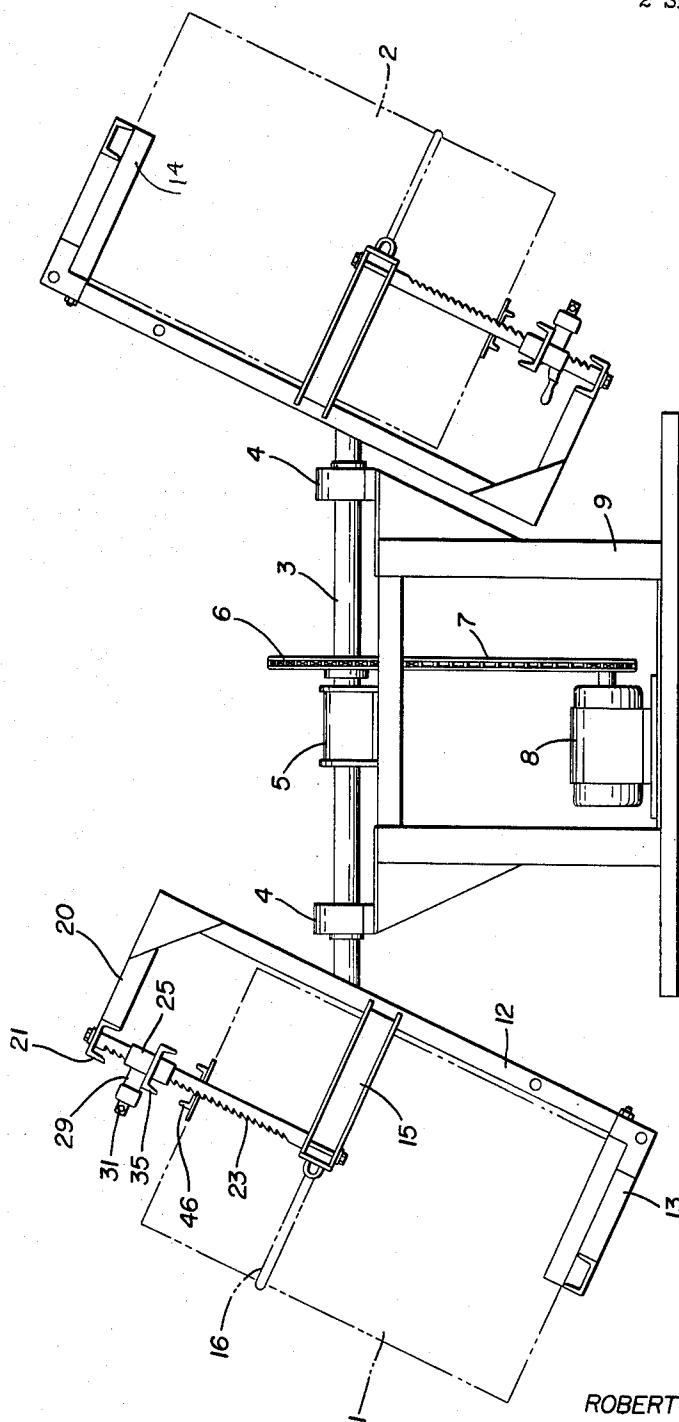


FIG. 1

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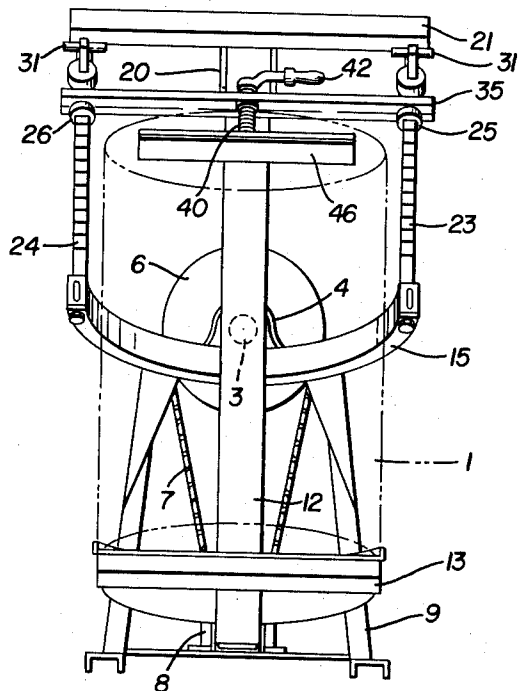


FIG. 2

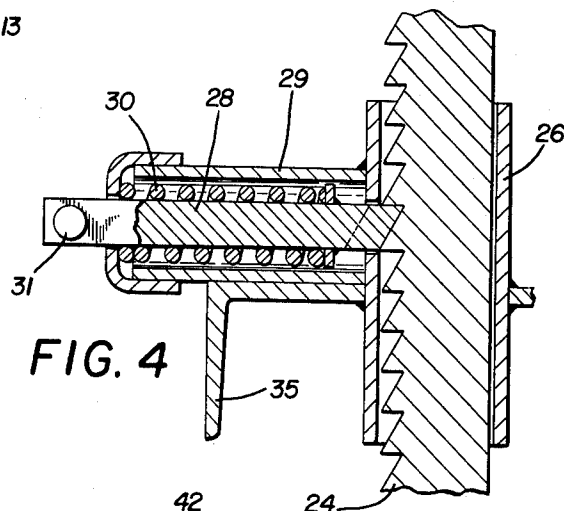


FIG. 4

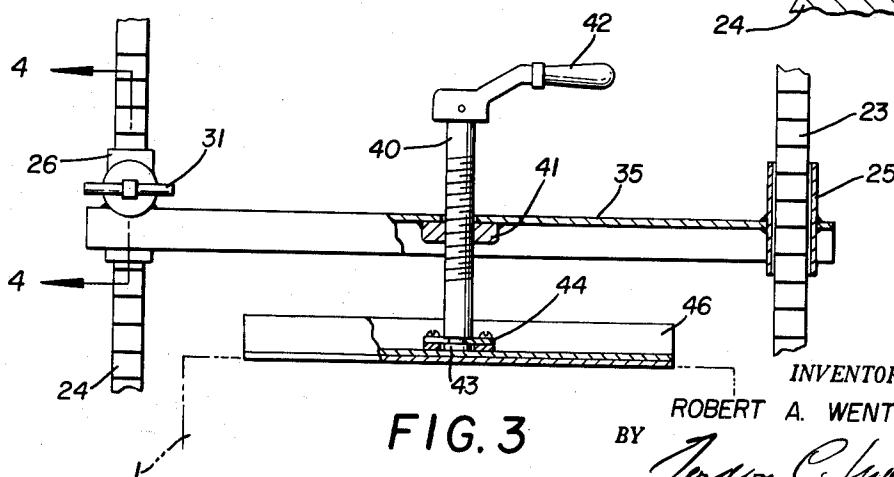


FIG. 3

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3,086,332

DRUM TUMBLER

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Filed Feb. 15, 1961, Ser. No. 89,479

4 Claims. (Cl. 51-164)

This invention relates to a drum tumbler.

It includes a holder for the drum which is fastened at an angle to one end of a drive shaft. Preferably this drum is counterbalanced by a drum in exactly the opposite position at the other end of the shaft.

The drum holder comprises a base, which may be merely a channel of iron or steel. There is a foot at one end of the base and a standard at the other end. The drum rests on the base and one end of it abuts the foot. A chain retainer, which is substantially semi-circular and extends upwardly to the axis of the drum, is located at about the midpoint of the channel and a chain with any suitable fast-acting snap is joined to the ends of this retainer to hold the drum against the channel.

The drum is held firmly in this position, with one end against the foot, by clamping means which presses against the other end. The clamping means can quickly be adjusted into operative position and it can be quickly released.

Ratches are located on each side of the drum, fastened to the chain retainer and the standard. There is a slide on each of the ratches and in each slide is a spring latch which is easily reciprocated in and out of engagement with the teeth of the ratch. There is an adjusting bar fastened across the two slides, and at the middle of this adjusting bar there is a compressing screw with a handle at the outer end to tighten the adjusting bar against the end of the drum.

The invention will be further described in connection with the accompanying drawings, in which—

FIG. 1 is a side elevation of the drum tumbler;

FIG. 2 is an end elevation taken at the left end of FIGURE 1;

FIG. 3 is an enlarged plan view of the clamping arrangement; and

FIG. 4 is an enlarged section through the latch and latch casing, taken on the line 4-4 of FIGURE 3.

The two drums 1 and 2 of FIGURE 1 are mounted angularly at the ends of the drive shaft 3 which is held in pillow blocks 4, and its two halves are united by the coupling 5. The sprocket 6 is driven by the roller chain 7 from a motor 8 which preferably operates through a speed reducer (not shown). This is all mounted on the frame 9.

The drum tumbler comprises the longitudinal channel 12 or other similar base. At one end is the foot 13, and the drum is held firmly against this. Angles 14 at the sides of the foot prevent lateral movement of the drum. At about the midpoint of the base is the chain retainer 15. This is preferably semicircular with a diameter just larger than the drum which is to be tumbled so as to hold the drum, although it may be any suitable shape. The ends of the chain 16 are attached to this chain retainer, and at one end there is a harness snap (not shown) or other suitable means for quickly attaching and detaching the chain.

At the other end of the tumbler base is the standard 20 with the cross bar 21 which is at about the height of

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the axis of the drum. Ratches 23 and 24 extend from the cross bar to the ends of the chain holder at about this height. Slides 25 and 26 embrace the two ratches and are adapted to be slid along them. The latches 28 within the housings 29 are held in the teeth of the respective ratches by springs 30. Handles 31 are provided for lifting the latches out of the teeth against the pressure of these springs. The latches can be slid toward the drum over the teeth of the ratch but must be lifted out of engagement with the teeth to be slid in the opposite direction.

The adjusting bar 35 spans the distance between the two ratches and is welded to the two slides 25 and 26.

At the middle of the adjusting bar is the compressing screw 40 which passes through the adjusting bar and is threaded in the nut 41 which is welded to the adjusting bar. The handle 42 is welded to one end of the screw at an angle to facilitate rotation of the screw. The enlargement 43 at the other end of the screw is held in the bearing 44. On rotating the handle 42 to thread the screw toward the drum, the clamping bar 46 is pressed against the end of the drum and holds it tight against the foot 13 during the tumbling operation.

To clamp a drum in operating position, the adjusting bar 35 is moved to its approximate final position and is held there by the latches 28. The handle 42 is then quickly turned to tighten the clamping bar 46 against the end of the drum. To release the drum, the handle 42 is turned in the other direction and, if necessary, the handles 31 of the latches are lifted in order to slide the adjusting bar 35 away from the head of the drum.

Although the tumbler is designed particularly for use with drums of a particular diameter, drums of somewhat larger or smaller diameter can be tumbled in it. The tumbler can be adjusted for use with drums of quite different lengths.

The drawings illustrate one embodiment of the invention. Modifications will suggest themselves to the man skilled in the art. The invention is covered in the claims which follow.

What I claim is:

1. In a drum tumbler, a base with a foot at one end adapted to hold one end of a drum when in the drum location, side members on opposite sides of the base intermediate the ends thereof which rise from the base substantially the distance of the drum radius, which side members limit side movement of the drum when in the drum location, releasable strapping means connecting the upper ends of said side members and capable of being tightened against a drum when in the drum location, a support at the other end of the base which extends upwardly from the base substantially the distance of the drum radius, parallel ratches on opposite sides of the drum location each extending from one side member to the end support at a distance from the base equal to the radius of the drum, a spring latch engageable with each ratch and supported in a slide adapted to be slid along its ratch, an adjusting bar spanning the distance between the ratches and attached to the slides, a compression screw threadedly engaged about the midpoint of the adjusting bar, a handle at one end of a compression screw and a block swivelly attached to the other end which block is adapted to be screwed against the other end of the drum.

2. A drum tumbler as defined in claim 1 in which said side members constitute a hemispherical support for the drum.

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3. The drum tumbler of claim 1 with its base fastened to one end of a drive shaft at an acute angle and means for rotating the shaft.

4. Two drum tumblers of claim 1 with their bases parallel to one another and fastened to opposite ends of a drive shaft and counterbalancing one another, and means for rotating the shaft.

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