March 18, 1930. J. BEHLE 1,750,741

METHOD OF FINISHING COTTON GIN RIBS

Filed Jan. 10, 1929

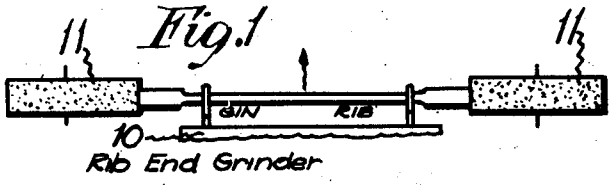


Fig. 1

Rib End Grinder



Fig. 2

Rib Foot Grinder

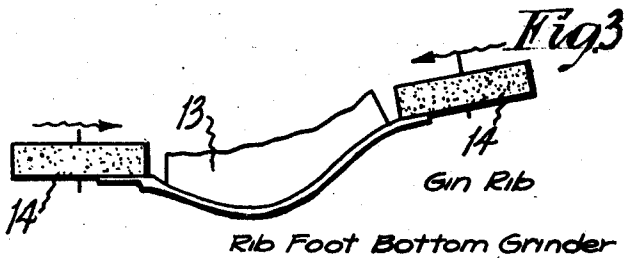


Fig. 3

Rib Foot Bottom Grinder

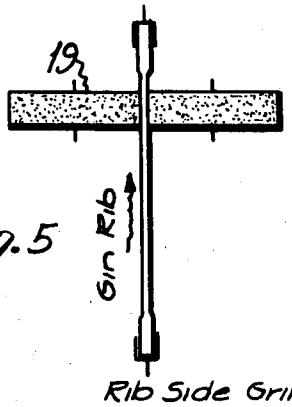


Fig. 5

Rib Side Grinder

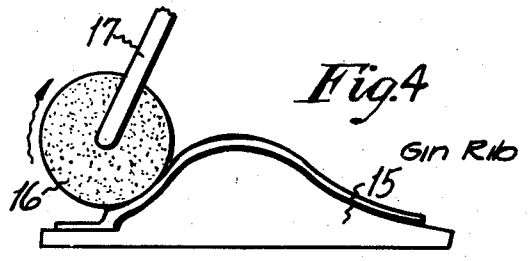


Fig. 4

Rib Top Grinder

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UNITED STATES PATENT OFFICE

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METHOD OF FINISHING COTTON-GIN RIBS

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This invention relates to new and useful improvements in methods of finishing cotton gin ribs.

It is important that the ribs used in cotton gins be properly finished and sized so that when they are assembled in the gin they will be correctly spaced and will present a smooth working face.

Where the ribs are ground by hand it is difficult to get each rib to the same gauge and the results depend largely upon the skill of the workman.

The main object of the invention is to carry the ribs through a series of successive grinding operations, whereby each rib is ground to a definite gauge and each rib is thus given substantially the same curvature.

A further object is to devise a method whereby an unskilled workman may expeditious grind the ribs and also whereby oversizing or under-sizing is prevented.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawing in which a diagrammatical view depicting the devices used in carrying out the method is shown.

A gin rib has a foot at each end and these feet are connected by a reduced shank or body. The body of the rib is curved to suit the requirements. If the feet are properly gauged they may be placed side by side and the saw spaces between the bodies will be correct, provided the bodies have been ground to the proper gauge.

In the drawing I have indicated five positions or stations, each indicating a separate operation. The rib is first brought to station No. 1 and when removed from station No. 5 it is finished and ready for mounting in the gin, provided the screw holes have been previously drilled in the feet.

The ribs are cast and while comparatively smooth require grinding and gauging. The ribs are placed on a moving carrier 10 at station No. 1 and carried between two grinding wheels 11, whereby the ends of the feet are ground and each rib is thus brought to the same length.

The ribs are next delivered to station No. 2 and passed longitudinally between the parallel sides of a pair of grinding wheels 12, whereby the side edge of the feet are ground. The wheels at both stations are adjustable so as to be set up to compensate for wear.

The ribs are carried from station No. 2 to station No. 3. At the latter station each rib is placed against a form 13 and the under faces of the feet ground by a pair of grinding wheels 14. The form limits the movement of the rib toward the wheels and thus the feet are faced to a definite gauge.

Each rib as it leaves station No. 3 is delivered to station No. 4 where it is mounted on a support 15 with its working face uppermost. A grinding wheel 16 mounted on a hanger 17 is then moved over the face of the rib body and the same smoothly and evenly ground.

The rib is next taken to station No. 5 and clamped in a suitable carrier 18. This carrier is moved so that the sides of the body of the rib are moved longitudinally between a pair of guiding wheels 19. These wheels are set to grind the body to a predetermined width or gauge.

When the rib is discharged from station No. 5 it is ready to be placed in the gin. Screw holes in the feet may be drilled either before the grinding or after. This method produces uniform ribs, saves a great amount of time and permits the use of unskilled labor.

While I have shown and described grinding wheels, it is to be understood that any instrumentality suitable for the purpose may be used in finishing the ribs.

What I claim, is:

1. The method of finishing cotton gin ribs which consists in passing each rib between means for removing material from the ends of its feet, then passing said rib between means for removing material from the side edges of the feet, then presenting the feet of said rib to means for removing material from the under faces of said rib feet, then subjecting said rib to means for finishing the working face of the rib body, and then passing the sides of said rib body between means for removing material, whereby each rib is finished and also gauged as to width and length.

2. The method of finishing cotton gin ribs

which consists in passing each rib transversely between grinding wheels to finish the ends of the feet and to gauge the rib to length, then passing each rib longitudinally between grinding wheels to finish and gauge the sides of the feet, then supporting said rib and limiting its application to grinders for dressing the under faces of the feet, then subjecting the working face of each rib to a grinding wheel, and then finishing the sides of the rib body between a pair of grinding wheels.

3. The method of finishing cotton gin ribs which consists in passing each rib between means for removing material from the side edges of the feet thereof to gage the same as to width, and then passing the sides of the rib body between means for removing material therefrom to gage said body of less width than the feet.

4. The method recited in claim 3, with the additional step of supporting said rib upon a form and removing material from the working face thereof.

5. The method recited in claim 3, with the additional step of passing said rib between means for removing material from the ends of the feet to gage the length of the rib.

In testimony whereof I affix my signature.

JOSEPH BEHLE.