E. TURPIN.

APPARATUS FOR SHARPENING KNIVES OF CHAFF CUTTERS.

APPLICATION FILED OCT. 15, 1909.

984,049.

Patented Feb. 14, 1911.

2 SHEETS—SHEET 1.

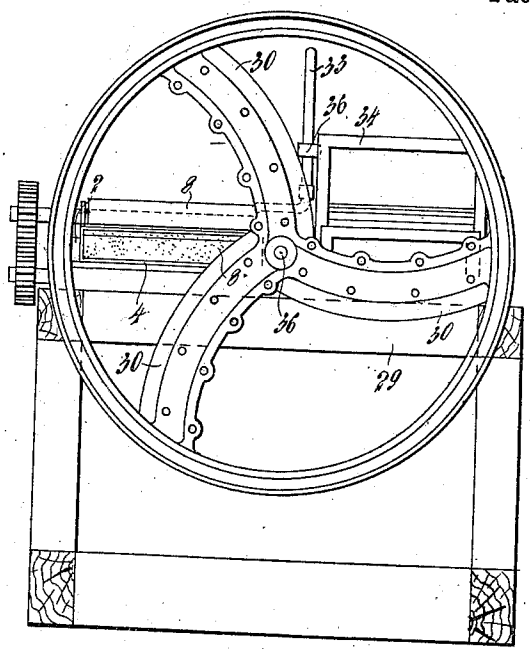

FIG. 1.

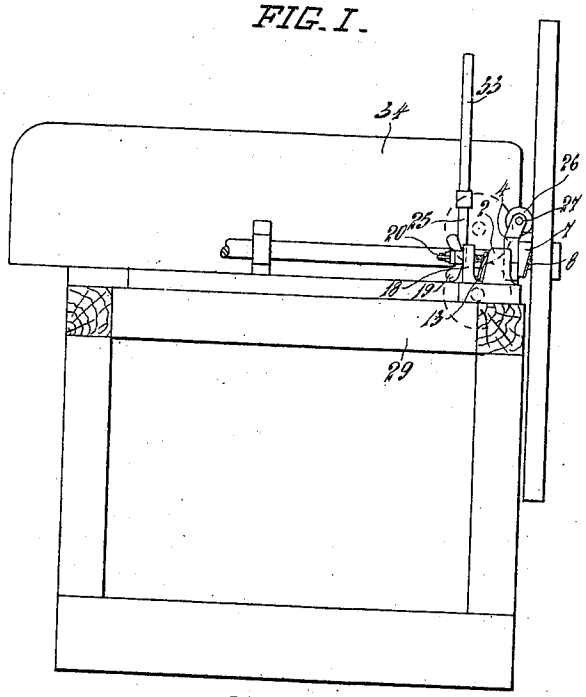

FIG. 2.

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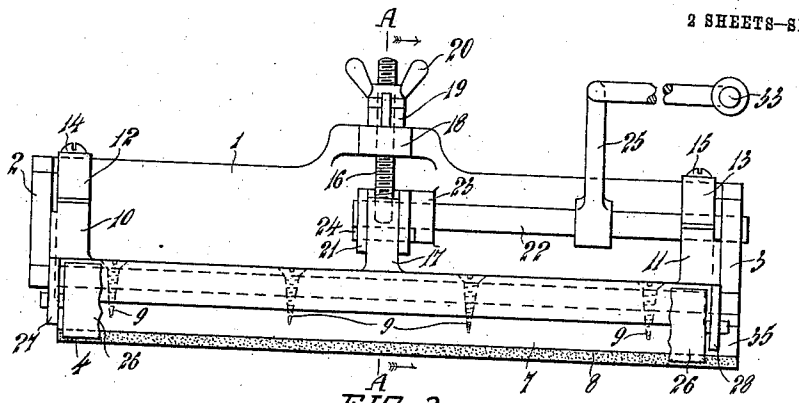

FIG. 3.

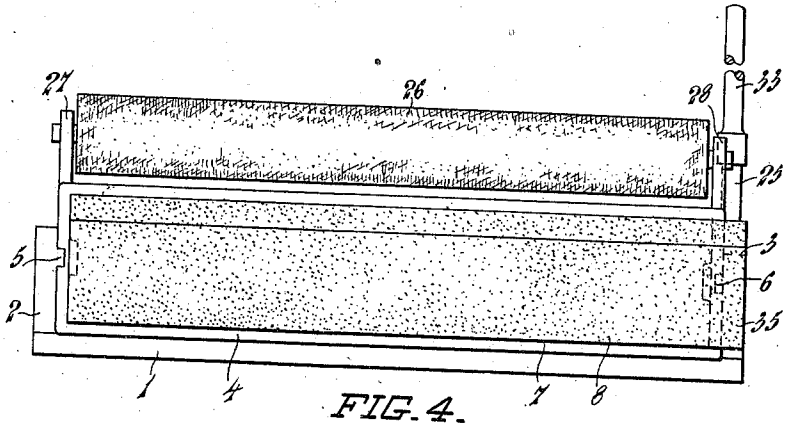

FIG. 4.

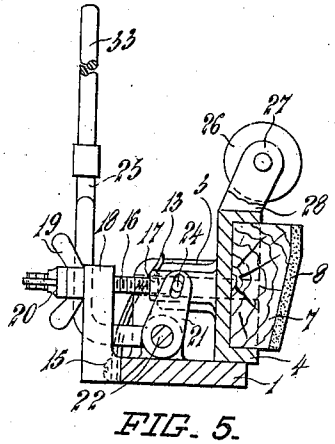

FIG. 5.

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UNITED STATES PATENT OFFICE.

ERNEST TURPIN, OF DANNEVIRKE, NEW ZEALAND, ASSIGNOR OF ONE-HALF TO GEORGE WRIGHT, OF WAITAHOVA, NEW ZEALAND.

APPARATUS FOR SHARPENING KNIVES OF CHAFF-CUTTERS.

984,049. Specification of Letters Patent. Patented Feb. 14, 1911.

Application filed October 15, 1909. Serial No. 522,883.

To all whom it may concern:

Be it known that I, ERNEST TURPIN, a citizen of the Dominion of New Zealand, and residing at Allardice street, Dannevirke, in the Provincial District of Wellington, in the Dominion of New Zealand, have invented certain new and useful Improvements in Apparatus for Sharpening the Knives of Chaff-Cutters, of which the following is a specification.

This invention provides apparatus for sharpening the knives of chaff cutters without the necessity of stopping the machine.

According hereto, a block of emery stone or similar material is adjustably secured to the frame of the machine, where it bears lightly against the blades as they revolve. A sharp edge is thus constantly maintained upon the blades.

The object of the invention is attained by the mechanism illustrated in the accompanying drawing.

Figure 1 is a front elevation, and Fig. 2 a side elevation of a chaff cutter fitted with the invention. Fig. 3 a plan, and Fig. 4 a front elevation of the emery stone, and its associated parts, Fig. 5, a cross sectional elevation on line A—A, Fig. 3.

The bracket 1 comprises a sole plate at the ends of which rise cheeks 2 and 3. A slide 4 fits within the bracket 1 and has grooves engaging ribs 5 and 6 integral with the cheeks 2 and 3. The slide is recessed and receives a block 7 of wood faced with an emery stone 8 or similar material, and fixed by screws 9. The slide 4 has lugs 10 and 11 integral with the cheeks 2 and 3 and grooved to receive the ribs 5 and 6. Springs 12 and 13 secured by screws 14 and 15 to the bracket 1 bear against the lugs 10 and 11 and tend to project the slide 4 from the bracket. The movement of the slide is limited by a bolt or screw 16 secured to a stem 17 integral with slide and passing through a lug 18 integral with the back of the bracket. Lock nuts 19 and 20 engage the back of the lug 18. A forked arm 21 secured upon a shaft 22 mounted in a bearing 23 and the cheek 3 is pivoted by a pin 24 to the stem 17, the holes in the arm for the pin being slotted to allow the screw 16 to move in a straight line. A lever 25 secured upon the spindle 22 enables an operator to turn the spindle to withdraw the slide 4.

A roller 26 mounted in bearings 27 and 28 integral with the slide 4 is covered with material which will hold moisture, such as sponge, chamois leather felt or the like. The roller moves with the slide and arrests any sparks which may happen to fly from the emery block.

The sharpener is fixed in position upon a chaff cutter by bolting the bracket 1 to the frame 29 and parallel to the plane of rotation of the knives 30. The slide 4 is allowed to be advanced by the springs 12 and 13 until the emery stone 8 touches each knife lightly at each revolution and thereby keeping their edges sharp. The sharpening may be continuous or intermittent as required. When it is desired to cease sharpening the knives the lever 25 is operated to withdraw the emery stone and is held back by a spring catch 31 of any ordinary construction. The lever 25 is cranked as shown to bring its handle 33 as near as possible to the board 34. The sharpener can then be covered over, leaving the handle 33 accessible for use. The block 7 is made with an extension 35 to carry the emery stone as close as possible to the shaft 36 and thus sharpen the knives throughout their entire length.

What I do claim and desire to secure by Letters Patent of the United States is:—

1. The herein described device for sharpening the blades of a rotary cutting mechanism comprising a supporting frame, abrading means mounted in guides in said frame, a rock shaft journaled in the frame and having an arm connected with the abrading means, and an adjustable stop for limiting the movement of the abrading means in one direction.

2. A sharpener for rotary cutting mechanism comprising a supporting frame, a block mounted in guides on said frame and provided with a suitable abrading surface, springs acting to move the block in one direction, adjustable means for limiting the movements of the block under the influence of the springs, and means supplemental to said limiting means for moving the block in opposition to the springs.

3. A sharpener for chaff cutters, comprising a bracket, a slide movable in the bracket, an emery stone carried in the slide, a stem integral with the slide, a forked arm pivoted to the stem, a shaft mounted

upon the bracket and secured to the forked arm and a lever secured to the shaft, substantially as set forth.

4. A sharpener having rotary cutting mechanism comprising a supporting frame, an abrading slide mounted on the frame and movable bodily whereby it may be adjusted toward or from the blade to be sharpened, and means carried by the slide for catching sparks produced by the action of the abrading material when the device is in use.

5. A sharpener for chaff cutters, comprising a bracket, a slide movable in the bracket, an emery stone carried in the slide, a roller covered with absorbent material and mounted upon the slide, and means for advancing and withdrawing the slide, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

ERNEST TURPIN.

Witnesses:
ERNEST SMITH BALDWIN,
ANNIE DOROTHY MCKENZIE.