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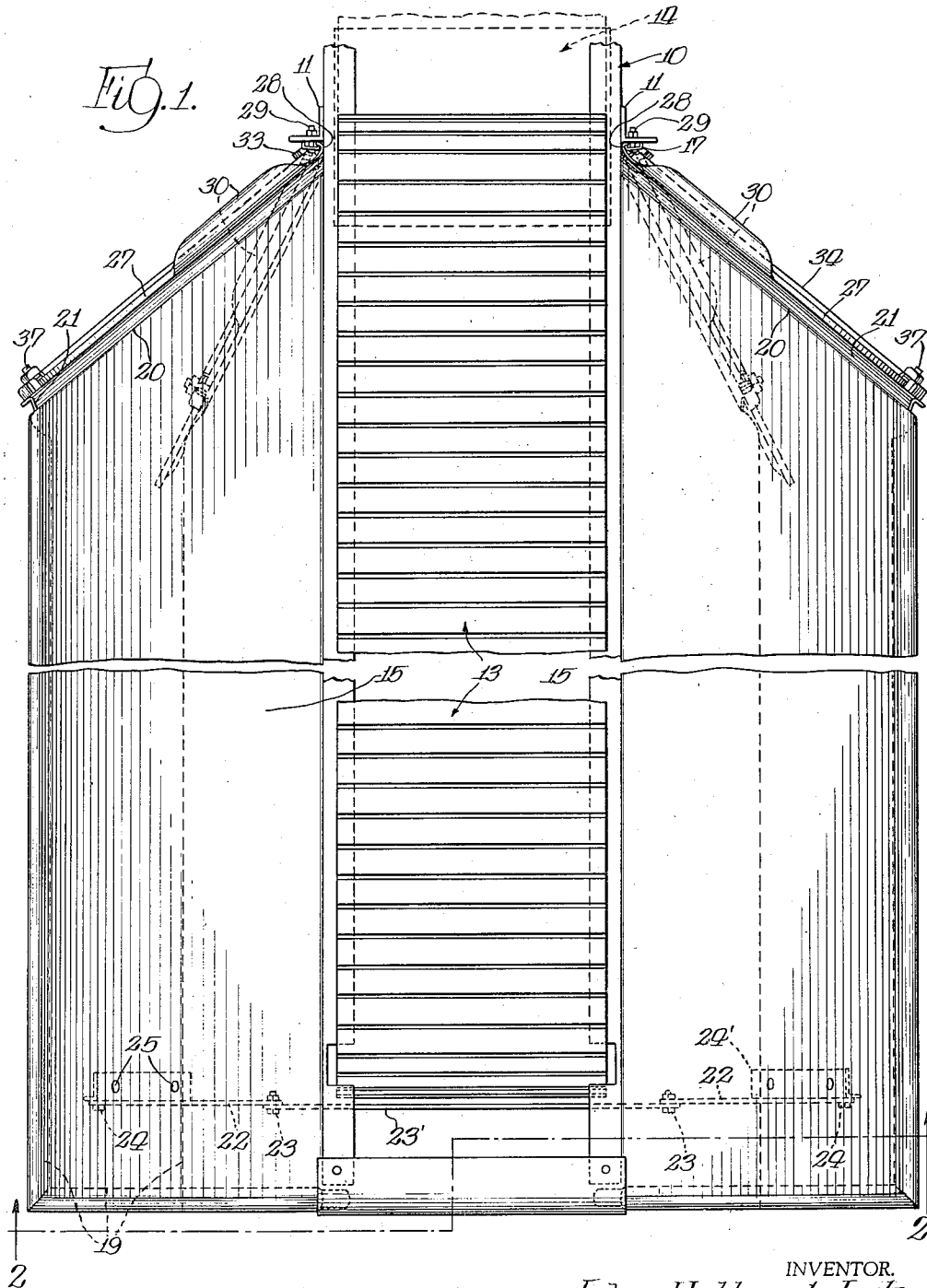
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2,244,364

ADJUSTABLE FEED TABLE FOR ROUGHAGE MILLS AND THE LIKE

Filed Nov. 27, 1939

2 Sheets-Sheet 1



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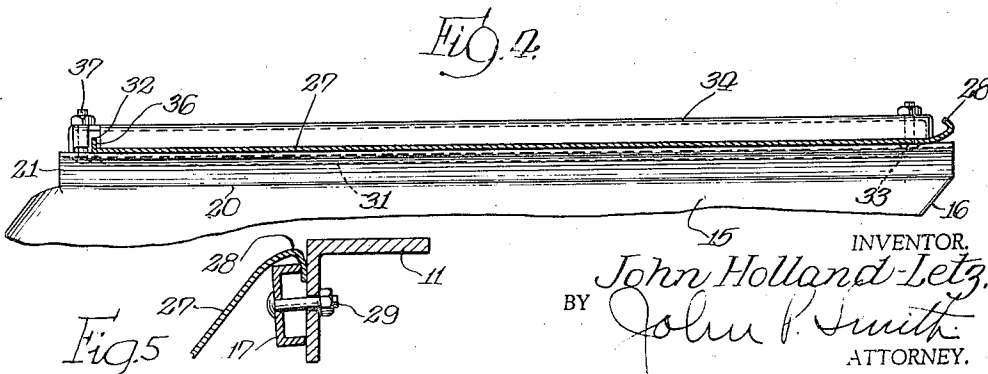
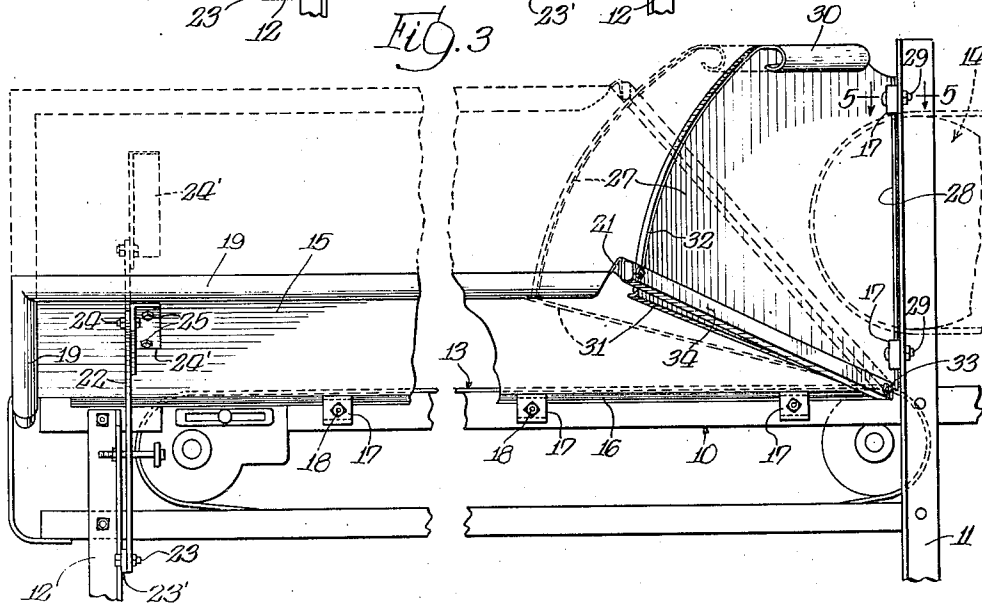
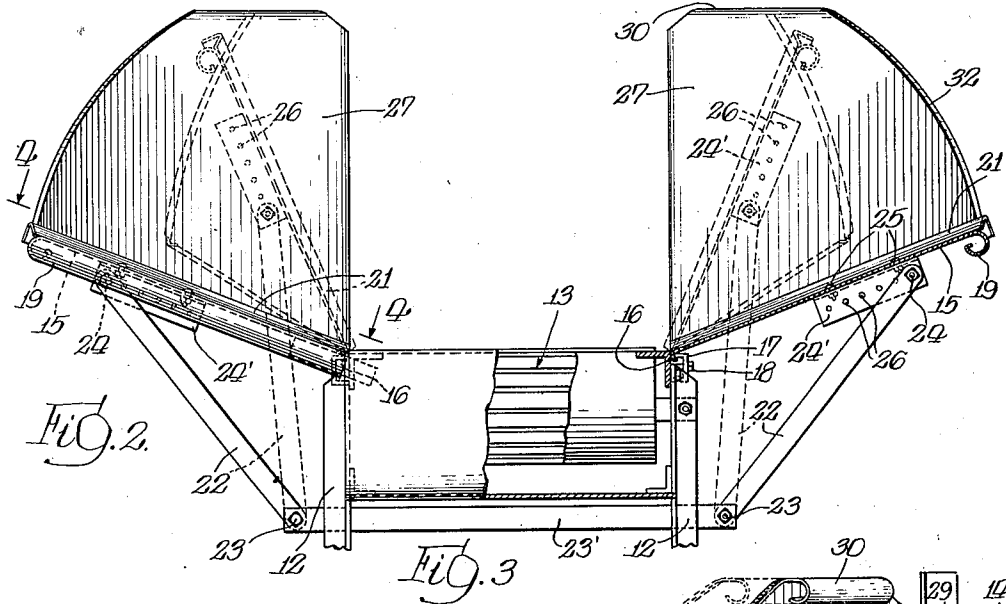
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ADJUSTABLE FEED TABLE FOR ROUGHAGE MILLS AND THE LIKE

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,244,364

ADJUSTABLE FEED TABLE FOR ROUGHAGE
MILLS AND THE LIKEJohn Holland-Letz, Crown Point, Ind., assignor to
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tion of Indiana

Application November 27, 1939, Serial No. 306,314

8 Claims. (Cl. 198—204)

The present invention relates generally to roughage mills and the like, but more particularly to a novel and improved type of an adjustable feed table so that the same may be ad-
justed to more satisfactorily and efficiently feed a large variety of materials to the roughage mill proper.

One of the primary objects of the present invention is to provide a novel and improved adjustable feed table for roughage mills or the like in which the sides thereof are pivotally connected to the frame of the roughage mill so that they may be adjusted from substantially a horizontal position to substantially a vertical position.

Another object of the invention is to provide a novel and improved adjustable feed table for roughage mills or the like which includes in addition to two oppositely disposed table members, also two vertically disposed converging and adjustable end members which may be adjusted in conformity to the forward bevelled end of the table members.

These and other objects are accomplished by providing a construction and an arrangement of the various parts in the manner hereinafter described and particularly pointed out in the appended claims.

Referring to the drawings:

Fig. 1 is a top plan view of the conveying mechanism of a more or less conventional roughage mill illustrating the manner in which my improved feed table is attached thereto;

Fig. 2 is a fragmentary cross sectional view taken on the line 2—2 in Fig. 1 of the drawings;

Fig. 3 is a side elevational view of my improved adjustable feed table showing the manner in which it is connected to the roughage mill;

Fig. 4 is a cross sectional view taken on the line 4—4 in Fig. 2; and

Fig. 5 is an enlarged cross sectional view taken on the line 5—5 in Fig. 3 of the drawings.

In illustrating one form of my invention I have shown the same in connection with a conventional type of roughage mill and the like, a fragmentary portion of which is shown in the drawings. The roughage mill in this instance comprises a longitudinally extending main frame, generally indicated by the reference character 10. This main frame 10 is supported on vertically extending members 11 and 12. Mounted in the longitudinally extending main frame 10 is the usual or conventional endless conveyor belt generally indicated by the reference character

13. The conveyor belt of course is trained about two pairs of sprocket wheels located at the opposite ends of the main frame 10 in the manner well understood in the art. Located adjacent the delivery end of the conveyor belt 13 and in a position slightly above the same, is a supplemental feeding mechanism diagrammatically illustrated and generally indicated by the reference character 14. This supplemental feeding mechanism may be of the floating feed belt type or a floating feed roller which is employed for feeding the material from the conveyor 13 to the cutting and grinding mechanism of the roughage mill not shown in the drawings. The description of the roughage mill as above disclosed is of the more or less conventional type of a construction more clearly illustrated in my prior patents bearings Nos. 1,946,084 and 2,119,336 issued respectively on February 6, 1934, and May 31, 1938.

One of the primary features of the present invention includes a simple construction of an adjustable table in combination with adjustable end guides or shields which permit the parts thereof to be adjusted so as to more efficiently handle, convey and feed a wide range and variety of material into the roughage mill. My novel and improved feed table comprises two oppositely arranged table members 15. These two table members 15 are preferably made of sheet iron material and have their inner or longitudinal edges bent at substantially right angles with respect to the main body portion as shown at 16 so as to form in effect a flange and a pivot portion when combined with spaced apart U-shaped brackets 17. These U-shaped pivot brackets 17 are secured to the side frame members of the main frame 10 by means of bolts 18. The outer and rear ends of each of the table members 15 are rolled or curved as shown at 19 to reinforce and strengthen these members. The forward ends of each of these table members 15 are bevelled or inclined at substantially an angle of 45° as shown at 20 and terminate in an upwardly projecting inverted V-shaped flange as shown at 21. This V-shaped flange reinforces the forward ends of each of the table members 15 and forms a flat surface against which the forward shields or guide members may adjustably contact throughout the adjustment of the table members in the manner hereinafter described. The rear ends of each of the adjustable table members 15 are supported in various position of adjustment by diagonal supporting bars 22 which have their lower ends piv-

otally connected as shown at 23 to the oppositely projecting ends of a transverse bar 23' which in turn is secured to the opposite frame supporting legs 12. The upper end of the brace members 22 are adjustably secured to angle brackets 24' by means of a bolt 24. The angle brackets 24' are secured to the underside of each of the table members 15 by means of bolts 25. The angle brackets 24' are provided with a plurality of uniformly spaced apertures 26 so that the upper ends of each of the brace bars 22 may be adjustably secured in any of the series of apertures 26 to adjust the angular position of each of the table members 15. In other words, by adjusting the upper end of the bar 22 in any one of the series of apertures 26 in the bracket 24' the table may be adjusted from the full line position to the dotted line position shown in Figs. 1, 2 and 3 or any position therebetween.

Another important feature of the present invention includes vertically pivoted converging guide or shield members which may be adjusted in connection with the table members 15 so as to conform with the table adjustments and to support the forward end of the table members. These guide or shield members are preferably made of sheet metal and are of sector-like formation and generally indicated by the reference character 27. The vertical edge of these sector-like shields are provided with curved and substantially right angular flanges 28. These flanges 28 together with two spaced apart U-shaped pivot brackets 17 and bolts 29 form the pivotal connection between each of the shields and the vertical frame members 11. The upper portion of each of the sector-like shields 27 is curved at the periphery as shown at 30 for reinforcing and strengthening the shield members. The lower edge of each of the sector-like shields 27 is bent inwardly at right angles as shown at 31 to reinforce and strengthen the shield members and to form a stop for the lowermost position for the table-like members 15. Formed on the arcuate portion of each of the sector-like members is an outwardly projecting peripheral flange 32. Pivoted to the lower inside corner by means of a bolt 33 to each of the sector-like members 27 is a channel shaped brace and locking member 34. The upper end of the brace or channel-like member 34 is provided with an oppositely disposed slots 35 in the flange portions thereof for the reception of the arcuate flange 32 of each of the sector-like shields 27. In order to secure the sector-like members 27 in cooperative and adjusted position with respect to the adjusted position of the feed table members 15, bolts 37 extend through the outer end of the V-shaped flange 21 and through the outer end of the brace and channel member 34 for securing these parts together.

Summarizing the advantages and functions of operation of my improved adjustable feed table for roughage mills and the like, let us assume that the feed table members are in their substantially horizontal or the lowermost position shown in the full lines in Figs. 1, 2 and 3 and that the operator is desirous of adjusting the table members from their lowermost position to their uppermost position or the position shown in dotted lines in these figures. In this connection it may be noted that when alfalfa or hay or other light material is being fed to the roughage mill, the same can be more conveniently fed therinto when the table members assume a more nearly horizontal position. However, when

corn stalks or similar material is fed into the roughage mill, it is essential to have the table members assume a more nearly vertical position. In order to adjust the feed tables 15 to their more nearly vertical position, the bolts 37 which rigidly secures the sector-like shields 27, the brace bars 34 and the table sections together are loosened and when the bolts 24 are removed from the supporting bars 22 and brackets 24' and inserted in the lowermost apertures 26 of the brackets 24' the table 15 may be secured in the broken line position as shown in Figs. 1, 2 and 3. During this adjustment the table members 15 are swung upwardly about the pivot brackets 17 and the bars 34 pivoted about their pivots on the bolts 33 along the peripheral flanges 32 of the sector-like shields. When these adjustments are obtained, the bolts 37 are secured and the table members 15 are then elevated and secured in adjusted position. In this connection it will also be noted that as this adjustment is being made, each of the shield members will be swung inwardly on a vertical axis about their respective pivot brackets 17 so as to conform to the inner angular bevel 20 which changes its angular position as the feed table members 15 are swung about their pivots. In this connection it will be noted that under ordinary circumstances the pivot brackets 17 will ordinarily permit this pivotal action. However, if it becomes necessary, the bolts securing these brackets may be slightly loosened to effect this adjustment and then subsequently secured.

While in the above specification I have described one embodiment which my invention may assume in practice, it will of course be understood that the same is capable of modification and that modification may be made without departing from the spirit and scope of the invention as expressed in the following claims.

What I claim is my invention and desire to secure by Letters Patent is:

1. A feed table for a roughage mill or the like comprising a frame, table members pivoted to the opposite sides of said frame, and shield members mounted on vertical pivots on said frame and adapted to be cooperatively adjusted with respect to said table members.

2. A feed table for a roughage mill or the like comprising a frame, table members pivoted to the opposite sides of said frame and adjustable from substantial horizontal position to substantially vertical position, and vertical shield members mounted on said frame and adjustable with respect to said table members.

3. A feed table for a roughage mill or the like comprising a frame, an endless conveyor belt mounted on said frame, feed table members pivoted to the opposite sides of said frame, means for adjusting said members from substantially horizontal position to substantially vertical position, and shield members mounted on said frame and adjustable with respect to said table members.

4. A feed table for a roughage mill or the like comprising a conveyor frame, oppositely disposed table members adjustable with respect thereto, the forward end of said members converging toward the delivery end of said conveyor frame, and shield members mounted on said frame and adjustable to contact the converging ends of said table members.

5. A feed table for a roughage mill or the like comprising a conveyor frame, an endless conveyor mounted on said frame, oppositely dis-

posed table members adjustable on a horizontal axis, means for supporting said members in various positions of adjustment, oppositely disposed shield members adjustable on a vertical axis, and means for securing said table members to said guide members. 5

6. A roughage mill feed table comprising a frame, vertically adjustable table members mounted on said frame, and horizontally adjustable shield members mounted on said frame 10 and adjustable in conformity with the adjustment of said table members, and means for securing said table members and shield members together in various positions of adjustment.

7. In combination with a roughage mill, a feed 15 table having a frame and an endless conveyor mounted on said frame and adjustable with respect thereto, table members adjustably secured to the opposite sides of said frame, the forward

ends of said table members converging toward the delivery end of said conveyor, sector-like shields mounted on said frame and engageable with the converging ends of said table members, and means for adjustably securing said members together.

8. In combination with a roughage mill, a feed table having a frame and an endless conveyor mounted on said frame, oppositely disposed table members mounted on said frame and adjustable with respect thereto on a horizontal axis, the forward ends of said table members converging toward the delivery end of said conveyor, sector-like shields pivoted on a vertical axis on said frame, and engageable with the respective table members, a bar pivoted to each of said sector-like members, and means for securing said bars and sector-like shields to said table members.

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