The sugarcane harvester with modified sugarcane transport direction and piling tray components has special characteristics composed of the long cylindrical tray (1) placed perpendicular to the conveyor belt (2) and installed at the rear of the sugarcane harvester to be parallel with the sugarcane harvester's rear. The top of the conveyor belt (2) has a slot for conveying trays (3) parallel with the conveyor belt (2) formed from the beginning of the conveyor belt (2) to its end (2) with the curved rail slot (4) and straight rail slots (5) that are perpendicular to the conveyor belt (2) and parallel with the long cylindrical tray (1) to allow sugarcane to fall into the long cylindrical tray (1) installed at the back of the sugarcane harvester.
SUGARCANE HARVESTER WITH MODIFIED SUGARCANE TRANSPORT DIRECTION AND PILING TRAY

Branch of Science Associated with the Invention

Engineering involved in the sugarcane harvester with modified sugarcane transport direction and piling tray.

Background of related art or science

Citing Patent Petty No. 030551, the device for holding and piling sugarcane has a conveyor belt to transport sugarcane to sugarcane piles with a tray for receiving sugarcane transported from the conveyor belt. The lower side has a gate controlled by a hydraulic system. When the amount of sugarcane in the pile reaches a certain level, the gate is opened to dump sugarcane to another pile on the ground. The tray installed at the back of the sugarcane harvester is level with the conveyor belt and causes the sugarcane transported from the conveyor belt and dumped onto the tray to be in the same direction as the conveyor belt. This has a disadvantage in that the tray and sugarcane extends to the rear of the harvester, resulting in a requirement for more space, inconvenience and unsafe traveling or use.

In addition, there are problems with traffic laws prescribing sugarcane harvester length and trays extending from the rear of sugarcane harvesters.

This invention solves the problem by arranging the long cylindrical tray to be perpendicular to the conveyor belt. The tray is installed at the rear of the sugarcane harvester to be parallel with the sugarcane harvester’s rear without extending backward, thereby resulting in safety and no disorder. The top of the conveyor belt has a slot for conveying trays parallel with the conveyor belt formed from the beginning of the conveyor belt to its end with continuous curved and straight rail slots that are perpendicular to the conveyor belt and parallel with the long cylindrical tray to allow sugarcane to fall into the tray. A part of the tray has a gate at the bottom of the tray that can be opened and closed with hydraulics to pile sugarcane on the ground.

Invention Characteristics and Objectives

This shows images of the sugarcane harvester with modified sugarcane transport direction and piling tray with characteristics consisting of the long cylindrical tray placed perpendicular to the conveyor belt. The tray is installed at the rear of the sugarcane harvester to be parallel with the
sugarcane harvester’s rear without extending backward, thereby resulting in safety and no disorder. The top of the conveyor belt has a slot for conveying trays parallel with the conveyor belt formed from the beginning of the conveyor belt to its end with continuous curved and straight rail slots that are perpendicular to the conveyor belt and parallel with the long cylindrical tray to allow sugarcane to fall to the tray. A part of the tray has a gate at the bottom of the tray that can be opened and closed with hydraulics to pile sugarcane on the ground.

The objective of this invention is to arrange for sugarcane harvesters with modified sugarcane transport direction and piling trays where the long cylindrical tray is placed perpendicular to the conveyor belt. The tray is installed at the rear of the sugarcane harvester to be parallel with the sugarcane harvester’s rear without extending backward, thereby resulting in safety and no disorder. This is to avoid problems with traffic laws prescribing sugarcane harvester length and trays extending from the rear of sugarcane harvesters.

**Full Disclosure of the Invention**

**Figures 1 and Figure 2** show images of the sugarcane harvester with modified sugarcane transport direction and piling tray components with characteristics composed of the long cylindrical tray (1) placed perpendicular to the conveyor belt (2). The tray is installed at the rear of the sugarcane harvester to be parallel with the sugarcane harvester's rear without extending backward, thereby resulting in safety and no disorder. The top of the conveyor belt (2) has a slot for conveying trays (3) parallel with the conveyor belt (2) formed from the beginning of the conveyor belt (2) to its end of the conveyor belt (2) with the curved rail slot (4) and straight rail slots (5) that are perpendicular to the conveyor belt (2) and parallel with the long cylindrical tray (1) to allow sugarcane to fall into the long cylindrical tray (1) installed at the back of the sugarcane harvester.

A part of the long cylindrical tray (1) has a gate at the bottom of the long cylindrical tray (1) that can be opened and closed with hydraulics (6) to pile sugarcane on the ground.

The sugarcane harvester begins working with sugarcane blades (7) which functions to cut sugarcane. The conveyor belt (2) functions to transport sugarcane to the long cylindrical tray (1). The sugarcane’s fall direction is changed with the curved rail slot (4) and the straight rail slots (5) perpendicular to the conveyor belt (2) and parallel with the long cylindrical tray (1) in order for the transported sugarcane to fall into the long cylindrical tray (1). The slot for conveying trays (3) along the length are installed at the top of the conveyor belt (2) and the long cylindrical tray (1).
**Brief Description of Drawing**

Figure 1 and Figure 2 show images of the sugarcane harvester with modified sugarcane transport direction and piling tray in this invention.

**Best Invention Method**

As previously described under the Full Disclosure of the Invention section.
Claims

1. The sugarcane harvester with modified sugarcane transport direction and piling tray components has characteristics composed of the sugarcane blades (7) functioning to cut sugarcane and the conveyor belt (2) functioning to transport sugarcane into the long cylindrical tray (1).

This invention has special characteristics consisting of the long cylindrical tray (1) placed perpendicular to the conveyor belt (2) and installed at the rear of the sugarcane harvester to be parallel with the sugarcane harvester’s rear. The top of the conveyor belt (2) has a slot for conveying trays (3) parallel with the conveyor belt (2) formed from the beginning of the conveyor belt (2) to its end of the conveyor belt (2) with the curved rail slot (4) and straight rail slots (5) that are perpendicular to the conveyor belt (2) and parallel with the long cylindrical tray (1) to allow sugarcane to fall into the long cylindrical tray (1) installed at the back of the sugarcane harvester.

2. The sugarcane harvester with modified sugarcane transport direction and piling tray in accordance with claims 1 is such that a part of the long cylindrical tray (1) has a gate at the bottom of the long cylindrical tray (1) that can be opened and closed with hydraulics (6) to pile sugarcane on the ground.

3. The sugarcane harvester with modified sugarcane transport direction and piling tray in accordance with claims 1 is such that Sugarcane blades (7) which functions to cut sugarcane. The conveyor belt (2) functions to transport sugarcane to the long cylindrical tray (1). The sugarcane’s fall direction is changed with the curved rail slot (4) and the straight rail slots (5) perpendicular to the conveyor belt (2) and parallel with the long cylindrical tray (1) in order for the transported sugarcane to fall into the long cylindrical tray (1).

4. The sugarcane harvester with modified sugarcane transport direction and piling tray in accordance with claims 1 is such that The slot for conveying trays (3) along the length are installed at the top of the conveyor belt (2) and the long cylindrical tray (1).