

IMPROVED METHOD STONE-TRAPPER WITH MULTIPLE POCKETS

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One of the main ways to develop cotton ginning enterprises is to develop and implement highly efficient techniques and technological processes.

Heavy objects and metal fragments of various sizes fall into the cotton during the process of weighing cotton, drying it in field conditions, and breaking the scum in cotton gins and transferring it to processing. In this case, objects fall into the working chamber of the machines installed in the cotton processing system, disrupt their work process, damage the working organs, as a result, the productivity of the machines decreases and the working organs quickly fail. At the same time, heavy objects, metal fragments are the main cause of fires in cotton ginning factories. The impact of heavy mixtures on the metal parts of the working bodies rotating at high speed causes a fire.

Therefore, the problem of separating heavy impurities during cotton processing is important. This article presents the results of scientific research carried out on the comprehensive study of the working processes of the existing devices that trap heavy impurities in cotton ginning enterprises today and on the elimination of shortcomings.

In cotton ginning plants, devices that hold heavy mixtures are mainly installed at the transition from the horizontal part of the pneumatic transport line to the vertical part. In this case, the air velocity that the cotton can lift and move in a vertical direction allows the separation of other compounds that are heavier than it. The biggest disadvantage of the device based on this principle is that the cotton along with heavy impurities falls to the bottom of the chamber.

To overcome this, it is necessary to reduce the dimensions of the pocket at the bottom of the camera. Such a change found a new way to increase the surface of the useful part of the pocket of the stone holder. In this method, it was proposed to install additional pockets at certain distances in the stone holder chamber, not by directly increasing the useful surface area. An experimental device designed to determine the number of pockets was developed with the ability to change the number, size and location of pockets.

As a result, cotton was prevented from falling into the dryer together with heavy mixtures.

In the device of the stone holder proposed by the author, a grid was installed in the intermediate distance between the proposed pockets. As a result, it is possible to clean from small impurities

together with heavy impurities in seed cotton. This reduces ginning processes and reduces fiber, seed damage and electricity consumption.

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