ISSN: 2350-0328

International Journal of Advanced Research in Science, Engineering and Technology

Vol. 6, Issue 7 , July 2019

Create a Device that can Remove Heavy Components from the Chassis Chamber

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ABSTRACT: At present, cotton ginnings are used in ginning factories that contain heavy ingredients in cotton. The main disadvantage of this is that with the low efficiency of heavy mixing, a loss of fiber by combining heavy fibers with certain amounts of fibers. In order to eliminate these shortcomings, a new improved gear unit was proposed. During the process of operation of this device, high concentrations of heavy cotton in cotton seeds are maintained. In order to prevent overloading, the device is designed to remove heavy compounds from the working camera.

KEY WORDS: cotton, seeds, fiber, stone, sand, soil, metal particles, working camera, pocket, pipe.

I. INTRODUCTION

The Decree of the President of the Republic of Uzbekistan Shavkat Mirziyoyev "On the Program of Measures for Further Development of the Textile and Textile Industry in 2017-2019" was signed in December 21, 2016. This program envisages the full processing of cotton fiber in our country by 2020, increasing production and export potential of the country by 2.7 times and delivering them to domestic and foreign markets. This will create a new competitive edge for the light industry and ensure a reliable entry into world trade. According to the analysis, currently about 50% of exports are yarn. At the same time, the quality of cotton yarn, which is the main raw material of the light industry, is closely linked to the processing of cotton. Quality and uninterrupted delivery of cotton fiber to light industry enterprises is one of the main tasks facing cotton ginning enterprises. In the production of high quality fiber and fiber products, the effective separation of large and minor contaminants in cotton seeds, as well as heavy compounds, ensures the continuous operation of the technological process.

II.THE MAIN PART

Different foreign objects can be added to the picking of the cotton while storing it. It includes 0.2% to 0.3% of overall cotton weight. This requires the use of gear separators that will separate cotton from heavy compounds. Otherwise, stones and metal particles enter the working cells of the gin, linter, and cleaning machines, which can negatively affect their work, workingorgans and, consequently, reduce the productivity of the equipment. Although the problem of improving the process of separation of heavy powders from the cotton industry is crucial, so far not enough equipment has been created and automation has not been established. Therefore, the technological chain of cotton processing is equipped with several low-efficiency devices that retain heavy compounds, reducing the productivity and movement radius of the transportation process.

The main drawbacks of the skier designs are that their geometric and technological dimensions are not scientifically grounded and the process of fertilization in the working cell has not been solved by the fact that it is not possible to keep heavy compounds in cotton due to the fact that it is impossible to remove heavy compounds and heavy compounds from the cotton cell. The most important task is to develop a device that removes heavier compounds that are stored in the worktable's operating chamber and detect any dimensions that can be used continuously. Growth in the cotton harvest is the task of increasing the production capacity of the cotton processing industry, improving the productivity of the equipment and improving the quality of its products. Execution of these tasks is more dependent on the operation of the airborne device installed in the area. Because it is an integral part of the process of direct cotton processing and determining its initial and working speeds. Depending on the place of installation, it is divided into two

ISSN: 2350-0328
International Journal of Advanced Research in Science, Engineering and Technology
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types. The first is called linear rockers. They are located on the line of the airborne device and set to the separator. The latter are non-linear slabs, which are then separated.

This rocker operates on: airborne air-borne gasses and heavy ingredients in the air-entering device enter the separation chamber through the inlet pipe and hit the walls of the separation chamber with a little fall. As a result, heavy ingredients from the cotton pockets fall into the pocket. The flow of the air flow through the heaviest mix of cotton pick-up pipelines continues its course.

Because of the low effectiveness of this sieve mixing compound - about 60%, research has been done to improve its structure.

The first experimental scientist K.M. Kobuljanov created 2ChTL cartridges.

The inlet pipe 1 comprises the separation chamber 2, the load cell 3, the valve 4 of the plate and the outlet pipe 5.

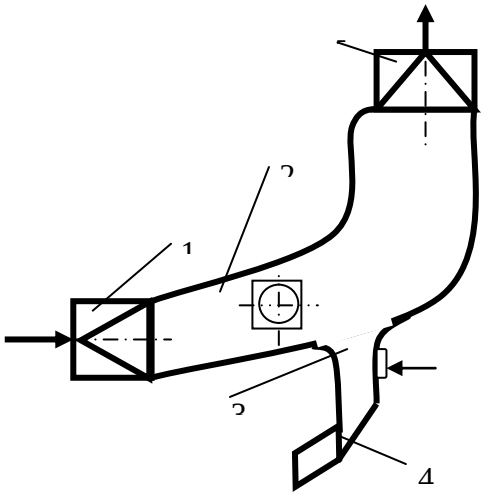

Figure 1. 2ChTL Stoneholder Machine.

1-input pipe, 2-working chambers, 3-pockets, 4-valves, 5-output pipes.

The heavyweightmixed with the cotton come to the separation chamber (2) via the pipe (1). Here, heavier compounds are broken down into the slabs of the rocker, resulting in the loss of speed, their separation sudden due to expansion of the circumferential cutting surface. Heavy mixes fall onto the loading chamber (3) and are removed when the plastine stain (4) is opened from the device. The cotton is removed from the sump and transported to the next transportation system. The efficiency of holding 2ChTL linear slabs reaches 60-70%.

It is proposed to install cone-shaped arrows on the input pipe of the stone gauge device, created by T. Maxamedov. These guides are chess-shaped and allow the worker to break into the cotton fields. In addition, the working camera in the front of the cotton pad's working chamber, which was facing the entrance, helped to break cotton.

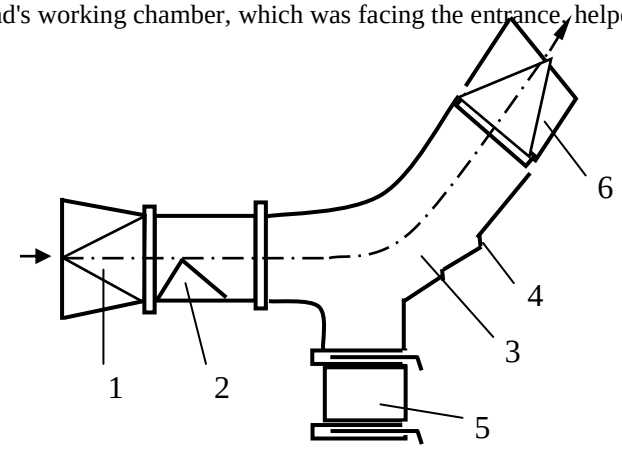

Figure 2. Cone-shaped pointer with built-in gear holder

1-inlet pipe, 2-cone splitters, 3-separation chambers, 4-spiral stops, 5-pockets, 6 outlet pipes.

ISSN: 2350-0328

International Journal of Advanced Research in Science, Engineering and Technology

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This slab consists of the following basic working parts. The inlet pipe (1) consists of a separation chamber (3), a receptacle (4), a pocket (5) and an outlet pipe (6) with a cone-shaped splitter (2) on its lower side. This sink works like this. the airflow carries the cotton inflow into the inlet pipe and the pumping speed is reduced due to the transverse section of the pipe that collapses on the conical shape of the separating surface. As a result, cotton is split into pieces and uniformly distributed across the face of a short pipe into a separation chamber. The surface of the stacking beam, so chosen, is so chosen that the heavier compounds that hit it move the direction of its movement to the pocket. Large-dimensional compounds in the separation chamber fall into the pocket under their weight. Cotton separated from heavier compounds continues its movement in airflow. This design is the result of efforts to create linear slabs of different designs.

At present, the existing gear systems have two shielded devices to remove the above-mentioned heavy compounds. When the operator opens the first shaft to remove the heavy compounds and then lowers the first shaver once again to the second gear, then opens the second shaver and removes heavy compounds. When the airborne device operates, the sack pad is loaded with heavy mixes and the timely opening of the shaver causes a malfunction. As a result, heavy metal compounds in the chaffing device pass away. Workers do not spend much time trying to extract heavy compounds. As a result, you will have full control over other processes in your workflow. The device does not need electricity. The construction is very simple, complicated machine-building processes are not required to prepare. To make things easier, most parts are made of standard materials that are easy to use. It does not require excessive costs for the current production system. The moving parts of the device are designed to work under the influence of varying load.

Performance of the device. When the heavyweight bodies in the system are gathered to the rock collector, after the weight of their weight reaches a certain amount, the weight of the load on the weight will suddenly open and the upper valve will move downward. The fact that the workers did not turn on the shift at the previous devices was the reason for the heavy mixes to go to the post-cleaning and jail machines. In the proposed bus, the above mentioned shortcomings were eliminated and the possibility of timely removal of heavy concentrations accumulated in the pockets without the participation of workers was ensured.

Based on the findings above, it can be concluded that no matter how well the stone processing device is improved in the processing plants, the efficiency of the storage of the rock cloth is low, and the process of holding small tailings in the process of cotton transportation has not yet been resolved. To eliminate these shortcomings, we can make new types of equipment. Reduce the size of the pockets to reduce the flow of cotton with heavy compounds reduces work efficiency. In order to solve this problem, there are two modifications to the linear slab design. Two experimental devices were developed to test these methods. The mass on the surface of the shaver falls onto the surface of the medium porcelain because of its weight. Then, the maize is added to the base mass into the cotton-picking chamber by means of the ejection stream generated by the opening of the lower shaft (4) at the same time, and is removed by the outlet pipe. Heavy bodies remain in the medium periphery. Then the upper gland closes, resulting in the movement of the ejection stream. Then the medium pigmented shiber is opened and heavy compounds are removed. Subsequently, lower peripherals are switched off and the unit returns to its original position. Then the heavy mixing process is returned in such a manner. To simplify the device's design, it can be used without any downtime. However, the absorption of atmospheric air through the bedrock will increase. Therefore, it is desirable to use the device as a shaver. This solution is simple, but it requires considerable attention.

In all ginning factories, a stone-crushing apparatus has been introduced, so that the accumulated mass at the bottom of the slab is not vacuumed out of the vacuum chamber, so that the collected masses should be removed from the vacuum chamber. It is also important to note that when removing the concentrated mass from the vacuum cleaner, it is important to ensure that the air does not penetrate. Because air leakage can stop cotton moving on the pneumatic truck, as well as the clutter on the gear holder can fall into it. Consequently, the vacuum chambers of the stones are different in their designs, depending on how the masses are separated. For example: vacuum clown, sleeveless chambers and other types.

In the vacuum-clinker design, the responsible person at the plant comes in and turns the vacuum valve with the elbow valve, resulting in mass movements between the vacuum valve wings and the mass drops down from the bottom. The shielding chamber system is a very simple and widely used construction, the process of which is as follows: two vacuum chambers are located in the vacuum chamber, and in the process of slab process, the vacuum chamber, that is, mass concentration on the first set is collected at a specific time and in a certain amount, the worker opens the first barrier of the vacuum chamber, and then the collected mass slips over the second barrier, and the worker restores the first barrier back to its original position. Once the worker closes the first barrier, it opens the second barrier and masses

ISSN: 2350-0328
International Journal of Advanced Research in Science, Engineering and Technology
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the vacuum down the camera and the worker restores the second barrier. This vacuum is prevented from penetrating the air (Fig. 3.10).

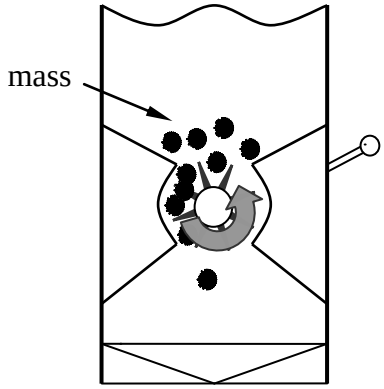

Figure 3. Vacuum-clinckerdevice, which continuously removes heavy mixtures from the working chamber's chamber

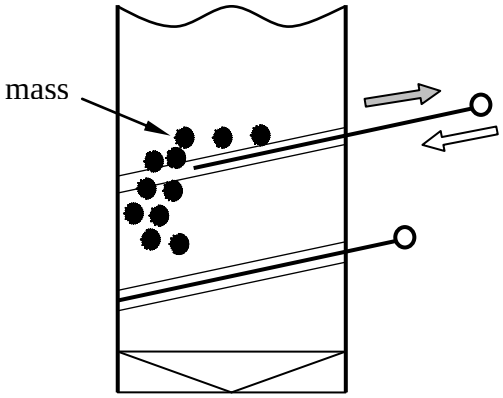

Figure 4. Shieldingdevice that removes unwanted heavy compounds from the working chamber's workcase

It is best to work with such devices, but the biggest problem is that a responsible employee comes in time to vacuum the camera away from the mass. If the worker does not leave the vacuum chamber on time and does not release the vacuum chamber from the mass, then the slab will be filled up and the heavy mixture in the pipeline will move to the post processing process without falling into the pockets of the chopper. This causes the above-mentioned problems to arise.

Based on this, a number of scientific research and experiments have been carried out and the expected results have been obtained in the process of creating a new fertilizer. This device is installed in the pneumatic system based on the algorithm, which is based on the first stone foundry. It is designed to hold heavy metals (stones and metal fragments), and it works continuously. The moving parts of the device are designed to work under extremely high load stress. The design of this device is complex. It does not mean that the device is not only a heavy-duty gear, but also a load that falls on the basis of its delicacy, or it may be possible to reduce the weight of the load by replacing the purge depending on the load. This, in turn, makes it possible to quickly dispose of heavy compounds that are accumulated in the device.

In the process of operation, the heavy substances that are held in the stone holder are collected on the 1stvalve and pressed downward. The porcine begins to slip slowly. The 1st valve moves on the surface of the 1st valve when passing through the 6th valve during the downward movementit will fall down.

ISSN: 2350-0328

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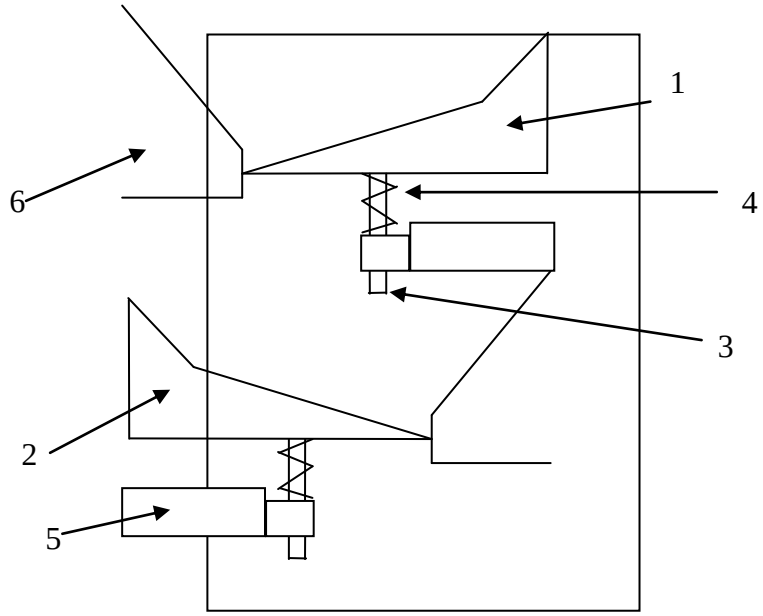
Figure 5. The scheme and test specimen of the device, which continuously removes heavy mixes from the worker chamber.



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1-2-opening valves, 3-val, 4-compressive purge, 5- bearing structure.

Here, the purge is attached to the top 5th base, and it only moves along the axis and downward. The heavy compounds falling from the first valve fall into the 2nd valve, where the above processes are repeated and the mass is released and the vacuum condition is maintained. The failure of the machine to break the shovel in the foreseeable future has resulted in the subsequent removal of heavier compounds into the subsequent cleaning and cracking machines. At the proposed facility, the shortcomings in the abyss have been extinguished, allowing the heavy mixes that are accumulated on the cobbles to go out without the help of workers.

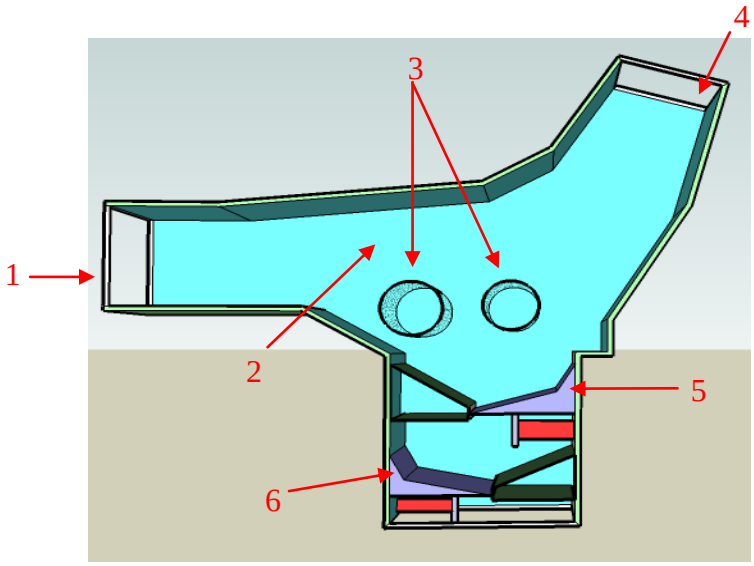

Figure 6. Scheme of mounting of the unit on the working pad of the stone player

1-input pipe, 2-working cameras, 3-drum, 4-output pipe, 5-6-open-loop barriers,

Experiments on these have shown that the efficiency of automated first and second devices are closer to one another and are much higher. These devices are simple and easy to use, but they also benefit greatly from the company.

III. CONCLUSION

Based on the theoretical and applied research to keep all the heavy ingredients in cotton, we draw the following conclusions:

Devices that are continuously removing the heaters in the working chamber have been analyzed.

The structure of the stone pad used to handle heavy loads in cotton.

A new design of the device, which constantly removes heavy compounds accumulated in the sump chamber, has been created.

ISSN: 2350-0328

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