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IMPROVING THE EFFICIENCY OF THE TECHNOLOGY FOR CLEANING SMALL IMPURITIES IN SEED COTTON

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Annotation. This article is about the national process of processing raw cotton with a variety of problems in cleaning large and small scum. In order to find solutions to this problem, it has been determined by the analysis of the effectiveness of the small-scale cotton-fertilization technology for other cotton fertilizers compared to other models.

Keywords. air flow, pipe, air pressure, mesh surface, air distributor.

INTRODUCTION

In order to improve the technological processes of the 1-XK small dirt cleaning machine, scientific research work was conducted and analyzed in the conditions of production. The results showed that small impurities (soil and cotton leaf particles) mixed with air in the air flow from the first pile drum were found to move to the next sections and fall back into the cotton.

The increase and decrease of productivity and efficiency of the cotton ginning enterprise depends on the technological processes of drying and cleaning seed cotton. Today, due to the increase in the types of cotton varieties and the emergence of special varieties, which are called difficult to clean, it is necessary to improve the technology and technique of cleaning seed cotton from small impurities. To this day, the 1XK small dirt cleaning machine is used in cotton ginning enterprises.

Structure and operation of 1XK-type cleaning machine.

A cross-sectional diagram of this machine is presented. The cleaner consists of 8 pile-plate drums. The piles are 75 mm high, and after every two rows of piles, the

sheets (planks) are fixed to the drum at the same height. Colosnik bars or perforated mesh are installed under the drums.

The cotton is fed to the machine through the loading chute to the supply rollers (1). Supply rollers are responsible for supplying cotton to pile-plate drums at a uniform rate. It is connected to the IVA variator

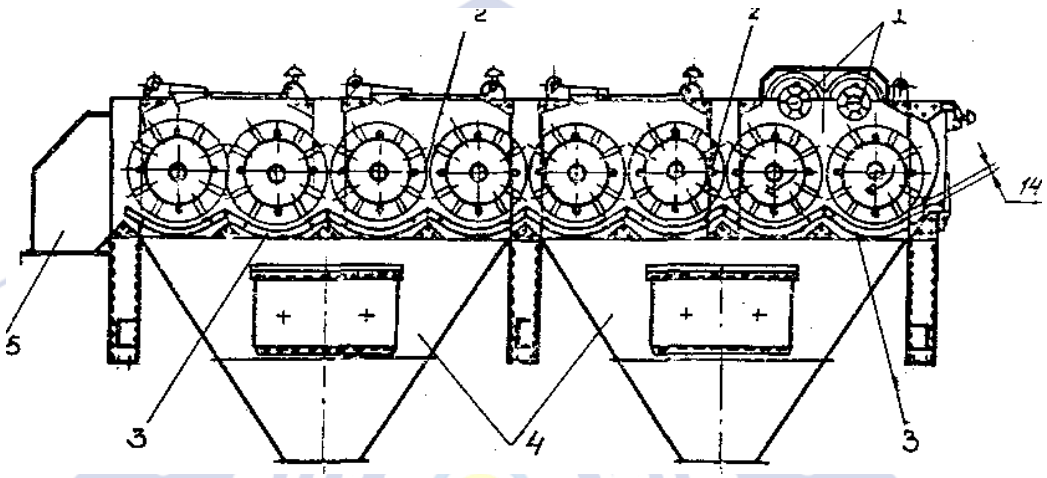
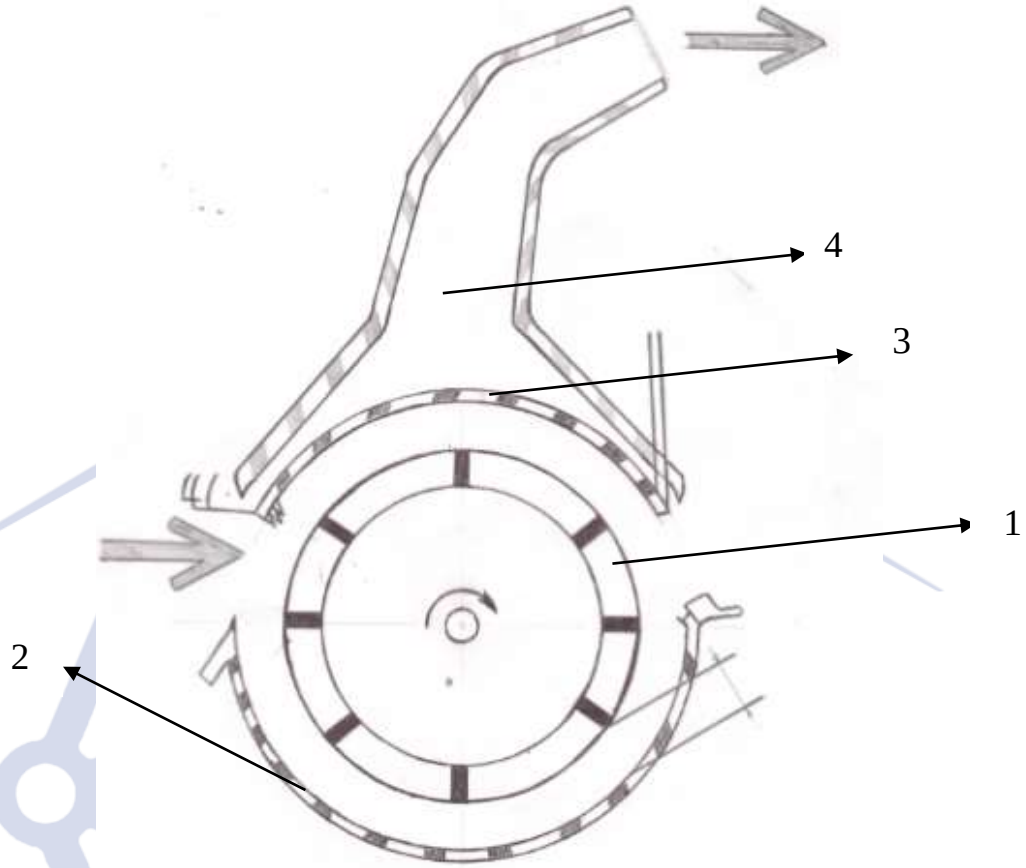


Figure 1. 1XTechnological scheme of the cotton seed cleaner from small impurities.
1-supply chains; 2-pile-blade drums; 3-grid surface (surface); 4th dirt

Cotton falls on piled drums (2) and is beaten with piles and hit on mesh surface (3). As a result, seeded cotton is shaken and cleaned of small impurities. The impurities released through the mesh surface fall into the hoppers (4) and are taken out with the help of a collecting auger.

In order to improve the technological processes of the 1-XK small dirt cleaning machine, scientific research work was conducted and analyzed in the conditions of production. The results showed that small impurities (soil and cotton leaf particles) mixed with air in the air flow from the first pile drum were found to move to the next sections and fall back into the cotton. In order to study these problems, a device for absorbing the air generated during the rotation of the drum on the upper part of the first pile drum was prepared and experimental tests were conducted.



An improved technological scheme of the 1-XK seed cotton cleaner from small impurities.
1-piled drum; 2-net surface (surface); 3- the surface of the air intake, 4 the suction tube inside the chamber

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