

UO'K 631.315.4

**A DEVICE WITH A GEAR SOFTENER THAT WORKS BETWEEN
ROWS OF COTTON**

Isakov Zafarjon Shuxrat

*“Gidromelioratsiya ishlarining texnika va
texnologiyalari” kafedrası tayanch doktoranti*

Bobirova Madina Bobir

“TIQXMMI” MTU Buxoro tabiiy resurslarni boshqarish instituti magistri.

Yusupova Oynura Mekhriddinovna

“TIQXMMI” MTU Buxoro tabiiy resurslarni boshqarish instituti talabasi.

Abstract: *This article describes the device with a gear softener that works between the cotton rows after watering the cotton. In the article, there is a word about the general structure and operation procedure of the gear softener device that works between rows of cotton.*

Key words: *agriculture, gear softener, modern equipment and technologies, rack, plank..*

Today, the role of the agricultural sector in the national economy of the country is very important. 63% of the country's population lives in rural areas. 35% of the employment of the working population corresponds to agriculture

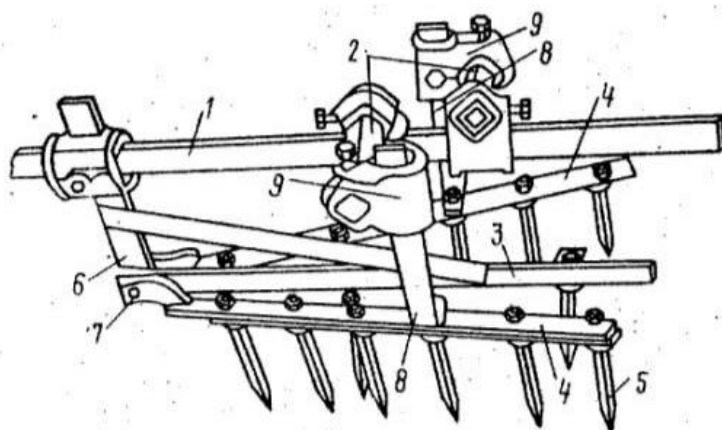
Uzbekistan ranks 6th among the world's cotton-producing countries. The standard of living of the population of our country, its material well-being depends on the progress of economic reforms in agriculture, the speed and efficiency of its development. At this point, the owners of farms take care of the land, cultivate it in a timely and high-quality manner, and observe all agrotechnical measures is an important factor in the life of the farm [1].

Increasing the efficiency of the production of agricultural products in our country is inextricably linked with the development of rural infrastructure. After all, raising the quality of the economic and social infrastructure in the villages to the level of modern requirements will not fail to have a positive effect on the country's development today.

As the President noted, there is a link in rural economy and social life, as well as in politics, through which the entire republic can achieve prosperity and prosperity. It is difficult to imagine the production of agricultural products without irrigated lands, because we get more than 90% of our crops from irrigated lands. Therefore, the problems of irrigation and land reclamation are crucial for us. In fact, since Uzbekistan is a country specializing in a large agricultural production complex, land reclamation and productivity are of crucial importance. The productivity of lands is mainly related to their irrigation and conservation. In this regard, our state has been implementing both legal and practical measures since the first days of independence [2].

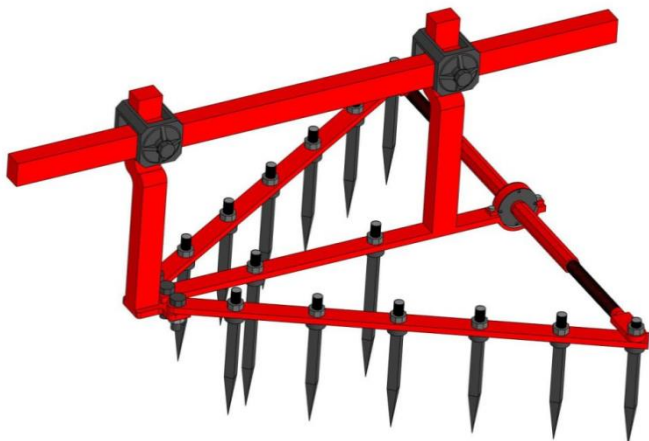
Mechanization of the agriculture of our republic in order to ensure the implementation of the decision of the President of the Republic of Uzbekistan Sh. Mirziyoyev "On additional measures to further increase the level of technical equipment of agriculture" In order to increase the productivity of agricultural products obtained from crops, extensive scientific and innovative works are being carried out, aimed at the application of modern techniques and technologies, which imply the effective use of modern science and technology achievements, and the improvement of existing ones.

Today, after irrigation between cotton rows, tillage is done only with a cultivator. But this cotton cannot fully process between the rows. As a result, after a certain time has passed between the rows of watered cotton, various cracks appear between the rows of cotton as a result of the daily decrease in soil moisture. This, in turn, firstly affects the root system of cotton, and secondly, the rapid evaporation of water from the surface of the earth, and the faster implementation of the complex of irrigation works. This, in turn, leads to a lot of water loss. Having studied the above problem, we offer a device with a gear softener that works between rows.



1 – picture. Constructive scheme of a gear softener that works between rows of cotton

The image above shows a to gear othed softener that works between rows of cotton. The gear softener, which works between the cotton rows, has a longitudinal brush 1 and transversely fixed brushes 2, and a stand 6 is installed perpendicularly from the front side of the longitudinal brush 1. On the rack 6, parallel to the burr 1, in one plane, the central plank 3, on which the teeth 5 are fixed, and located in a slightly inclined position, 1 pair of planks 4 are attached. Here, the planks 4 are fixed in a hinged position, and they are connected to the cross bars 2 by a vertical stand 8, and with the help of the adjusting mechanism 9, the longitudinal and coverage widths of the planks 4 are adjusted. In the device, the depth of tillage and the width of coverage are adjusted by changing the position of the plates 4 separately vertically and at an angle.



2 – picture. General view of a gear softener that works between rows of cotton

The toothed softener is adjusted depending on the depth of cultivation and the width of coverage before starting the work. The processing depth is carried out by vertically placing the planks 4 with the help of the fixator in the adjustment mechanism 9. Processing is carried out by pushing the planks 4 around the hinge 7 and changing the position of the vertical racks 8 standing on the crossbars 2. The device has the ability to adjust each of the 4 planks in a separate position. The ability to adjust the depth of the central plate 3 with fixed teeth and the plate 4, which is adjustable in coverage width, increases the quality of soil cultivation with the device.

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