



SCIENTIFIC-TECHNIQUE TO ENSURE THE STABLE MOVEMENT OF WORKING BODIES CONNECTED BY THE RAMA AND PARALLELOGRAMM MECHANISMS OF SOIL TREATMENT MACHINES

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Annotation

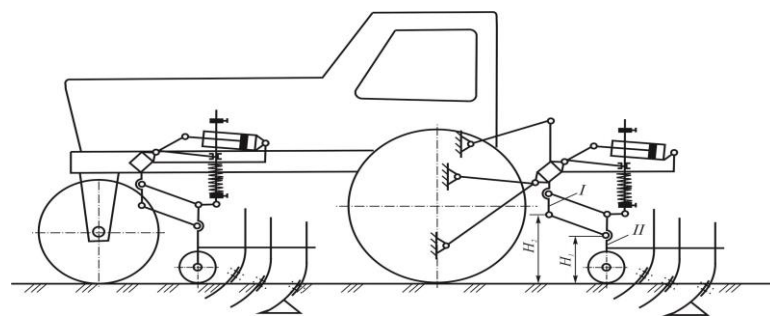
The article presents the scientific and technical solutions developed to ensure the stable movement of tillage machines on the working depth of the working bodies of the tiller (hinged) connected by a parallelogram mechanism with a frame. This is based on the fact that the working bodies connected to the frame by means of parallelogram mechanisms sink to a certain working depth and stable movement at this depth is achieved by ensuring that their longitudinal traction operates horizontally or close to it.

Keywords. Section of cotton cultivator working bodies, softener-smoothing softener, gear softener of cotton processing machine, working depth and its stability,

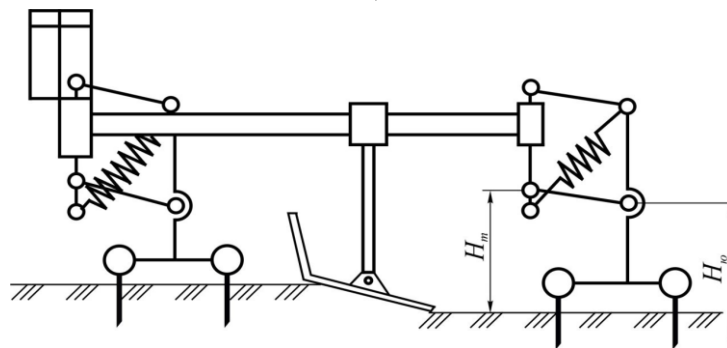
parallelogram mechanism, longitudinal pulls of parallelogram mechanism, scientific and technical solutions.

According to the results of the research, scientific and technical solutions have been developed to ensure stable movement of the working body of the cotton cultivator hinged to the machine frame by means of a parallelogram mechanism, the softener-smoothing softener and the device softener used for threshing. (Look at the picture)

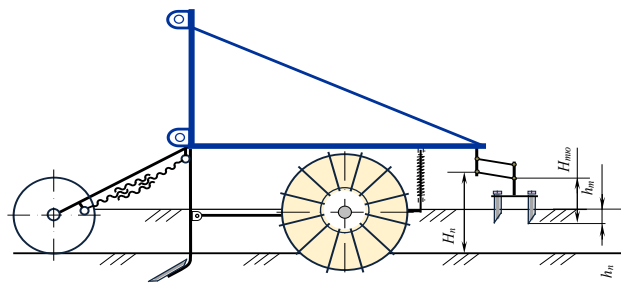
The section of the working bodies of the cotton cultivator, the softener-smoother for preparing the soil for planting and the gear softener of the cultivator are marked.



a)



b)



(c)

Schemes for scientific and technical solutions for the section of the working bodies of the cotton cultivator (a), the softener-smoothing softener (b) and the gear softener



In order to eliminate the influence of physical and mechanical properties of the soil and the speed of the aggregate on these parameters and to ensure energy and material savings, they must be horizontal and close to the working process of longitudinal traction of parallelogram mechanisms. [1-5]:

a) by section of the working bodies of cotton cultivators (scheme "a" in the picture)

$$H_1 = H_2, \quad (1)$$

where H_1 is the base of the working body section of cotton cultivators of the parallelogram mechanism [8] from the lower point of the wheel vertical distance to the lower drive hinge, m;

H_2 - tractor base on which the frames of the cotton cultivator are mounted from the plane, [7] i.e. the bottom of the tractor drive wheels

The bottom of the parallelogram mechanism from the point is immobile vertical distance to the hinge, m. [9]

b) on the softener-smoothing softener (scheme "b" in the picture)

$$H_t = H_{i0} - H_{i0}, \quad (2)$$

where H_m is the smoothing level of the working surface traps

the bottom of the smoothing parallelogram mechanism from the point vertical distance to the fixed hinge, m;

Hugh - from the tip of the softener teeth it is the mechanism of the parallelogram vertical distance to the lower drive hinge, m;

H_{i0} - processing depth of softener teeth, m.

c) on the gear softener of the device for processing piles (scheme "v" in the picture)

$$H_n = H_{m0} + h_n - h_m,$$

(3)

where H_n is the base of the base wheel of the device that processes the piles

The gear softener parallelogram from the plane (bottom point)

up to the lower fixed hinge of the mechanism distance, m;

H_{m0} is a parallelogram from the tip of the tooth softener [10]

vertical to the lower moving hinge of the mechanism distance, m;

H_n is the height of the pile to be processed, m;

H_m is the required processing depth for the top of the pile, m.



When terms (1) - (3) are met, the section of the working body of the cotton cultivator, the softener of the softener, the longitudinal traction of the parallelogram mechanisms with the gear softener of the cultivator operate horizontally or close to it. the speed of aggregate movement does not significantly affect the stability of their sinking depth and tillage depth. [11]

(1) change the lengths of the reducer mechanism I or bracket (column) II and the height of the cultivator frame relative to the field surface, (2) term the correct selection, term (3) is provided by changing the vertical distance H_n from the lower point of the support [6] wheel to the lower fixed hinge of the gear softener parallelogram mechanism and correct selection of the vertical distance from the tip of the gear softener teeth to the lower hinge of the parallelogram mechanism.

Conclusion

Ensuring that the longitudinal traction of the parallelogram mechanism operates horizontally or close to it in order to eliminate the influence of soil physico-mechanical properties and speed of movement on these parameters is achieved.

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