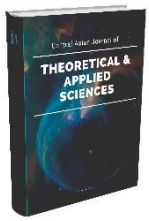

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Universal Drum Mill Throwing Somonli and Beda Presses, Grain Products

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Annotation: *The article discusses the design of the drum, which is the main working body of the mill, which crushes straw and alfalfa presses, as well as grain products into a powder, and its versatility, efficiency, energy saving and design of the drum, which simultaneously grinds straw and alfalfa, grain products a compact, economical device is offered.*

Keywords: *Universal, drum, grid, electric motor, vertical, horizontal, blades, hammers, cyclone.*

In the conditions of market economy in our country, the development of agriculture, farms and entrepreneurship is a priority. They believe that the policy of the President, especially today, is to develop entrepreneurship and farming in rural areas and rabbit breeding, poultry and livestock, and as a result to create jobs.

The purpose of this is to increase the national income of citizens in our country, along with the addition of meat products.

The production and mechanization of mixed fodder, hay and vitamin-rich fodder play an important role in animal husbandry.

Today, the lack of mechanized equipment and facilities for the production of vitamin-rich feed for livestock, poultry and rabbits indicates a high demand for it.

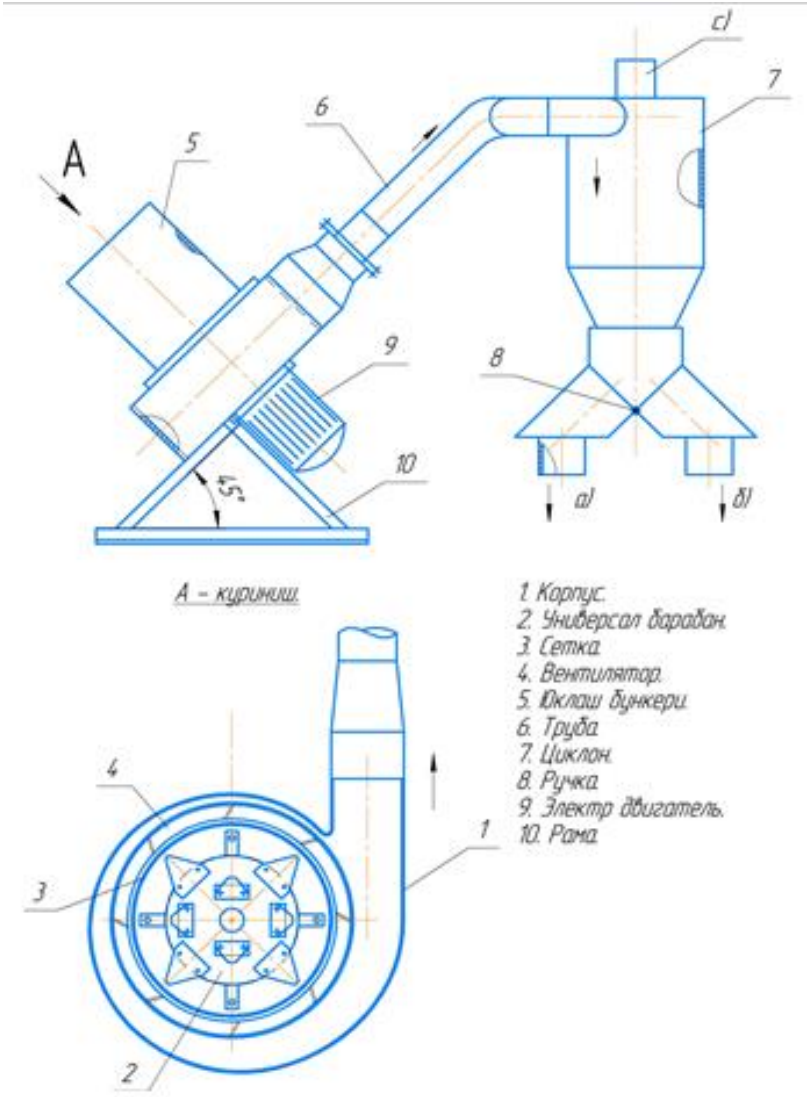
In our country, various imported feed mills are used.

Due to the lack of production of such devices and equipment in our country, they are forced to import and use foreign-made devices.

With all this in mind, the following is a brief overview of the efficiency and advantages of the proposed universal drum mill.

At present, there are various technologies and mechanisms for the production of compound feeds. In all of this, the hay is crushed separately and the grain is crushed separately.

In the technology we offer, these two processes (operations) are performed simultaneously, i.e. on a universal drum.



Picture 1. Universal drum grinder

The structure of the mill (Picture 1) and the principle of operation are described below. The product is loaded into the drum through the loading hopper 5. The housing is fixed to the frame 10, and the movement of the drum is transmitted through the electric motor 9.

The crushed product passes through the grid 3 using a fan 4, and through the pipe 6 to the cyclone 7. In a cyclone, the product separates the dust and falls into the containers. The pen 8 controls the flow of the product into the container.

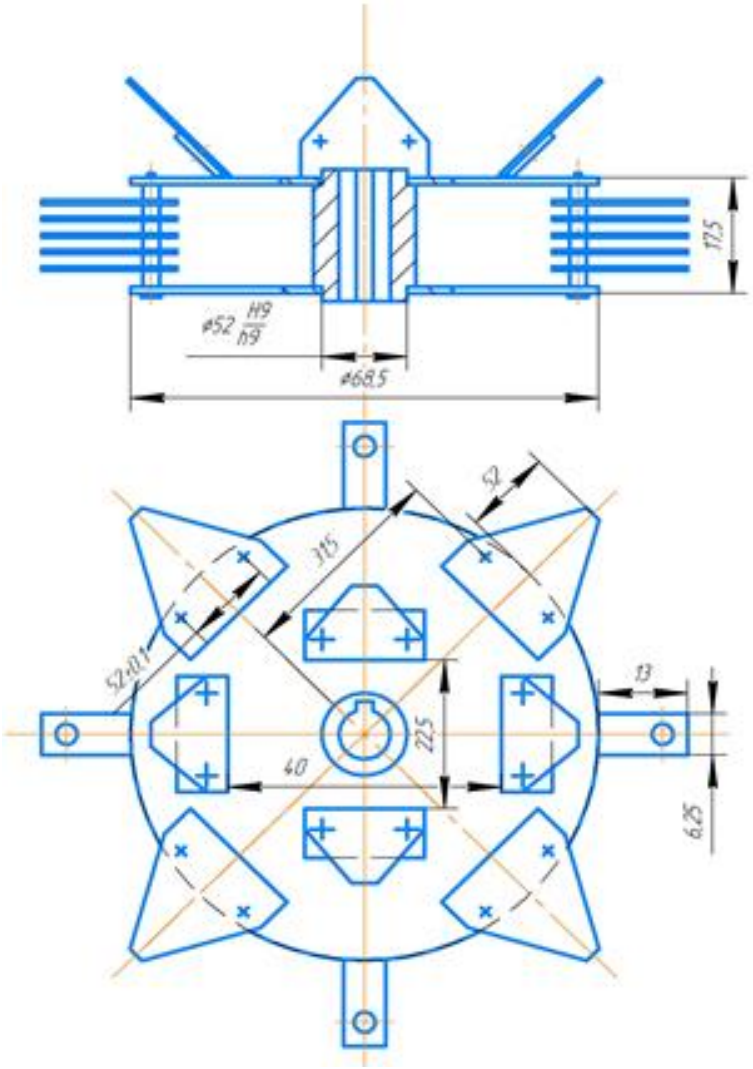
The fine hay and grain products in the drum are mainly made by the speed of rotation of the drum and by cutting or hammering the knives and hammers in it. The fineness and size of the product or the resulting powder depends on the mesh (sieve) on the drum. If the diameter of the holes in the sieve is reduced, the fineness of the output wave will increase.

The rapid exchange of the mesh (sieve) in the device is taken into account, which allows us to change the sieve and get the product, that is, the resulting powder in different fine states.

If the diameter of the holes in the grid is increased, the efficiency of the device will increase. This is because the larger the diameter of the holes, the higher the permeability of the crushed product. That is,

the barrier to product resistance decreases. The time it takes for knives and hammers to cut and break is reduced.

It has been repeatedly experimented that the efficiency of the device depends on the increase in the diameter of the holes in the grid (sieve) as the speed of rotation of the drum increases. If we make the holes in the grid with a diameter of *d = 8 mm* and grind a single alfalfa or straw press at *t = 1 min* , the same press from the *d = 2 mm grid will be crushed at t = 2 min* . Hence, the performance of a device varies according to the law of arithmetic progression.



Picture 2. General view of the universal drum

At the same time, the service life of the drum, ie the level of suitability, is also being studied. The drum is equipped with 8 knives and 20 hammers. Knives and hammers are attached to the lower and upper discs of the drum. These two discs are welded to a single stupitsa. The drum design is designed so that the blades and hammers can be exchanged. If the blades and hammers on the drum are worn out, they can be easily replaced with a new one. This allows you to swallow time. It should also be noted that the technology of production of the grid, which is the main working body of the drum, is also very simple. All details of the design are made from local raw materials.

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