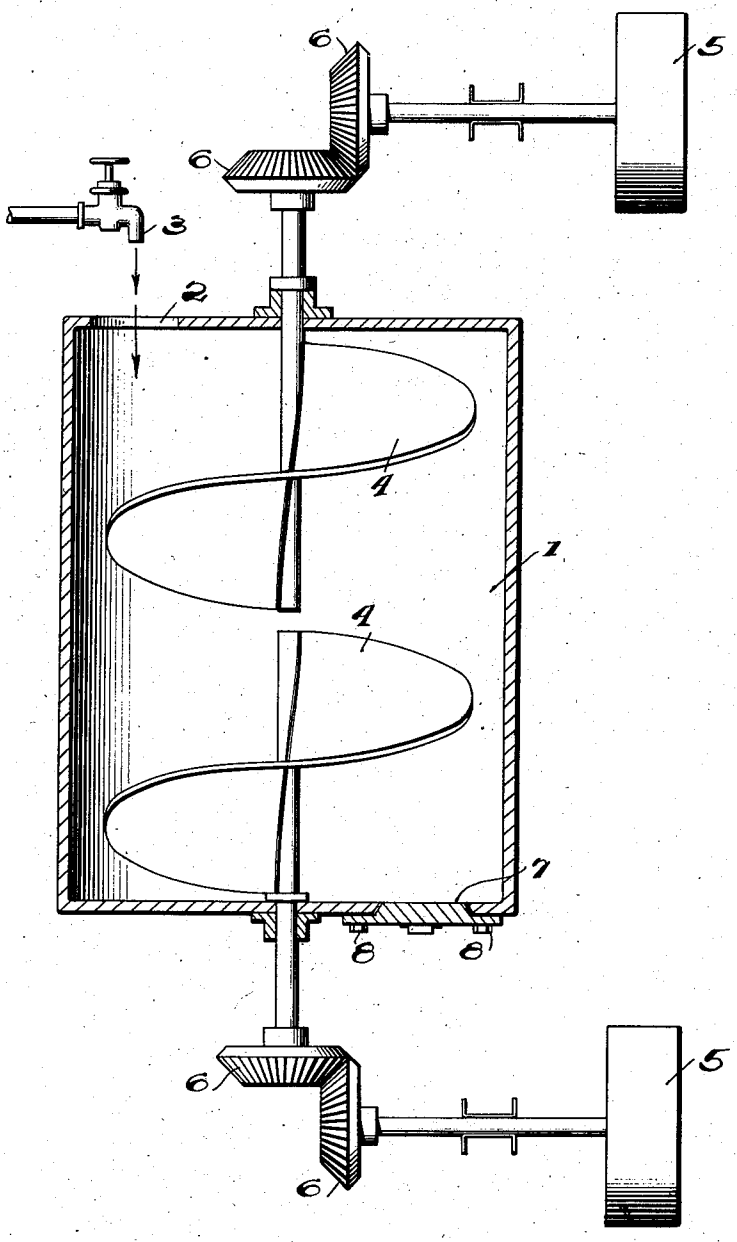
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DECORTICATING APPARATUS FOR GRAIN

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DECORTICATING APPARATUS FOR GRAIN

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1 Claim. (Cl. 83—34)

This invention relates to a novel and improved apparatus for decorticating wheat or the like, and substantially has for its object a simple apparatus by means of which the decortication or hulling of said grain may be performed with a far greater yield than that secured by means of the decorticating processes heretofore used.

In the known methods employed for hulling or decorticating wheat, when rubbing or abrading the grains by means of stones for obtaining the product known in commerce as rolled wheat, the yield of the process is rather low, as in the operations carried out for that purpose the grain is not only decorticated or hulled, but also a considerable part of the useful material of the grain is removed, with the consequent increase of refuse.

In accordance with the present invention, the decortication of the grain is performed by means of a slight rubbing of the grains against each other within a moist medium, with which, if so desired, a suitable amount of bran may be mixed homogeneously so that the bran which is preferably in the shape of powder, will fill all the interstices between the grain.

In the accompanying drawing is shown a decorticating apparatus which is particularly suitable for carrying out my decorticating process.

The machine essentially consists of a closed receptacle or drum 1, of rectangular, cylindrical or other suitable shape in cross section, provided at the top with an opening 2, for introducing the grain to be treated. A faucet 3 is conveniently arranged above the said opening 2, for feeding in the amount of water necessary for moistening the wheat.

At the bottom of the receptacle 1 is provided a discharge opening 7, closed by means of a cover and suitable screws and nuts, as indicated by 8, whereby, when opened, the discharge of the treated material is effected.

The operation of the apparatus is as follows:

The wheat to be decorticated is charged into the drum by the opening 2, so as to substantially fill the same, and thereupon the faucet 3 is opened for moistening the grain to the desired extent. If desired and according to the nature of the grain to be treated, a suitable amount of bran powder is also introduced so as to fill the hollow spaces between the grains.

By means of the pulley 5, the rotation of a screw agitator or agitators 4 are started, which act to stir the moisted grain, with or without the bran powder, thereby causing the grains to rub against each other and eventually against the bran, during a period of about twenty minutes. The two screw agitators 4, 4 shown in the drawing are of the same pitch and hand, and are respectively driven by two individual shafts which respectively are journaled in the top and bottom plates of drum 1 and have separate drive pulleys 5, 5. After this time, the cover 7 is removed and the decorticated grain is discharged, together with the hull particles removed therefrom and the bran.

The discharged material or mixture of decorticated wheat, hull particles and bran is then subjected to treatment which is usual after decorticating as drying and separation, after which the decorticated wheat will be discharged with a yield much higher than that obtained by the known processes heretofore used, as the slight friction or rubbing to which the grain is submitted in the drum 1, will not cause the abrasion of the softer parts of the grain and in consequence, the waste material produced by the operation will be considerably less than that formed by the known processes.

The rotation of the pulleys 5 is performed by power furnished from a suitable engine, not shown in the drawing, and the preferred speed of the agitating device will be of about 600 revolutions per minute.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim and desire to secure by Letters Patent, is:

In decorticating apparatus for grain, a casing adapted to stand vertically and having top and bottom end plates, a pair of shafts respectively passing through said top and bottom end plates and being respectively rotatably and substantially co-axially journaled therein, individual drive means for rotatably driving said shafts, and a pair of screw agitators of the same pitch respectively fixedly mounted substantially co-axially on said shafts with the same hand and with their adjacent ends substantially spaced to provide a grain path therebetween.

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