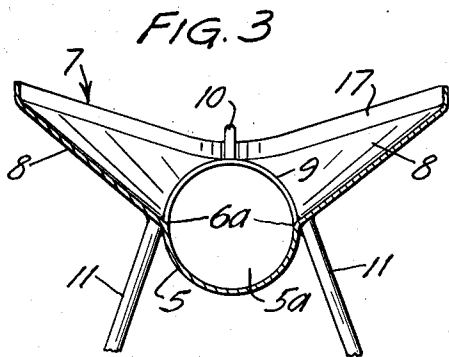
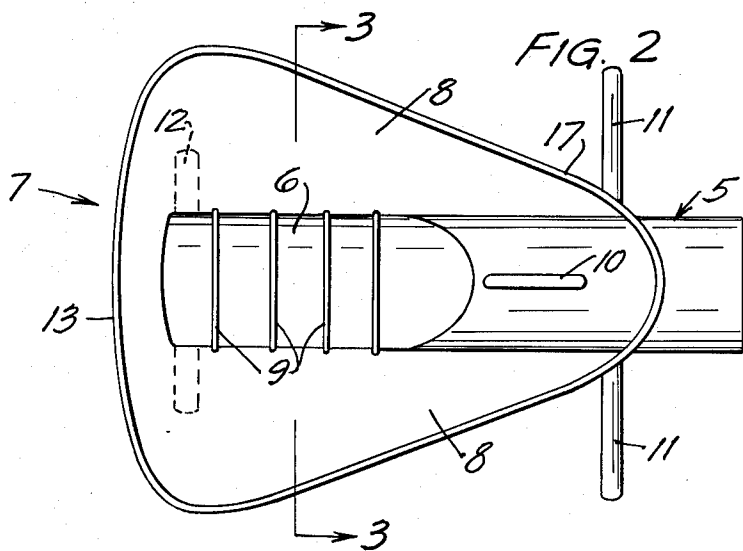
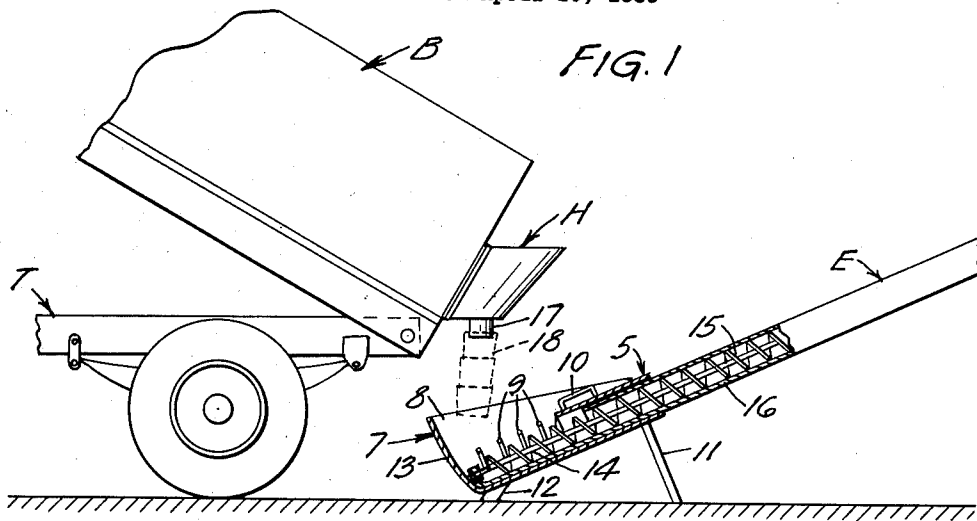


March 12, 1963

E. F. RENSCH  
GRAIN AUGER ATTACHMENT  
Filed April 13, 1959

3,080,960



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**GRAIN AUGER ATTACHMENT**  
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 Filed Apr. 13, 1959, Ser. No. 805,859  
 1 Claim. (Cl. 198—64)

This invention relates generally to apparatus for loading and unloading a fluent material such as grain and the like and is directed particularly to an attachment for use with an inclined lift elevator such as a grain auger.

An object of this invention is a novel portable compact attachment for transferring fluent material such as grain from a storage bin or dump truck to an elevating mechanism having an endless conveyor system such as a screw type conveyor or auger.

Still another object is a device for transferring fluent material such as grain directly to a lift elevator without spillage and contamination of the material.

Another object is a grain transferring device which detachably and telescopically encloses the loading end of a lift elevator and feeds all of the granular material directly to the conveying means of the lift elevator without the use or need of clamping or fixed attachment means.

A further object is an attachment of the class described which is readily adaptable to lift elevators presently in use without necessitating any modification whatsoever therein.

Still another object is a portable, readily attachable and removable grain auger attachment of integral unitary construction which permits the granular material to be fed directly from a feeding or storage device such as the box of a dump truck to the elevator without contamination or spillage thereof, and without interfering with the raising and lowering of said box.

A still further object is an attachment of the class described which serves as a safety device by enclosing the exposed portions of the elevator in such a manner as to prevent hands, feet or mechanical equipment from being caught therein while permitting ready access of the fluent granular material to the conveying system.

Still another object is an attachment of the class described which feeds or directs all of the fluent granular material directly to the conveying mechanism of the lift elevator, thereby eliminating the necessity for the tedious and time consuming job of cleaning up around the elevator after use.

Still another object is an attachment of the class described which prevents spillage of the granular material on the surrounding area when the action of the lift elevator is momentarily interrupted.

Still another object is an attachment of the class described which is light in weight and easily handled.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views, and in which:

FIG. 1 is a side elevational view of the attachment of my invention in assembled relationship with an auger type lift elevator and shown in use assisting to convey fluent granular material from a dump truck through the lift elevator to a storage bin;

FIG. 2 is a top plan view of the attachment; and

FIG. 3 is a vertical section taken on the line 3—3 of FIG. 2.

The attachment of my invention, as shown in a preferred form in the drawings, consists of a cylindrical conveyor enclosing sleeve portion 5 having a cross sectional opening 5a in the forward or leading end thereof for receiving the lower end of the lift elevator E and having a material receiving opening 6 in the rear upper portion and flaring upwardly therefrom is a hopper portion 7 of

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generally triangular configuration in the form shown, which is integrally united with the sleeve portion, the tapered sides 8 and back wall 13 thereof inclining inwardly or converging from top to bottom so as to surround the material receiving opening 6 in the sleeve and engage the upper marginal edges 6a of said opening 6, as best seen in FIG. 3, so as to direct all fluent granular material received by the hopper portion directly into and through said material receiving opening. The hopper portion 7 is preferably somewhat wide and shallow or dishshaped, rather than high and narrow, to prevent the hopper portion interfering with the box B of the dump truck T when the box is tilted at a large angle causing the lower end of said box to descend somewhat and the material conveying apparatus such as the hopper H with it. The upper marginal edge 17 of the hopper portion is upturned to a vertical position.

The material receiving opening 6 is provided with a plurality of parallel spaced apart arcuate guard members or bars 9 which span the width of the opening 6 and prevent passage of any sizable object such as a hand or foot or the snout of a delivery chute while readily permitting the passage of the fluent granular material therethrough. These guard members 9 prevent injury or accident due to an object such as a hand, foot or chute coming in contact with the conveying mechanism, particularly in those instances when a worm type gear or auger such as that shown in FIG. 1 by the reference numeral 15 is employed.

For convenience in carrying and transporting, the attachment is provided with a handle 10 disposed preferably close to the center of gravity of the attachment for proper balancing and ease in carrying. The underportion of the attachment may be optionally provided with supporting members such as the forwardly disposed legs 11 and a single stand 12 disposed at the rear to maintain the attachment in proper position and balance on the ground. The forwardly disposed legs 11 are preferably of greater length than the rearwardly disposed leg or stand 12 in order that the attachment may be maintained at a proper angle substantially parallel to the normal inclination of the elevator so as to properly mate therewith. Or, as a satisfactory alternative, the supporting unit may consist solely of the laterally extending bar member 12 only disposed at the point where the underside of the attachment would normally rest on the ground when the attachment is in an inclined position.

To use, the elevator is properly positioned to receive the fluent granular material from an enclosure such as the box B of a dump truck T and the lower exposed end 14 thereof is simply raised a few inches and the attachment of my invention is thereupon slid over the lower end thereof with the exposed material receiving end 14 of the lift elevator extending down into the sleeve so as to be contiguous with the closed end or back wall 13 of the sleeve and be properly positioned beneath the material receiving opening of the attachment so as to be properly disposed for receiving and conveying the fluent granular material as it is delivered to the attachment through the hopper portion. The sleeve portion 5 is of sufficient length to engage the protective tube 16 which surrounds and encloses substantially the entire length of the auger 15 so that the exposed material receiving portion of the auger 14 is completely enclosed by the attachment, except that portion which is in register with the guarded material receiving opening 6 of the attachment.

Any suitable means may be employed for delivering the fluent granular material to the hopper portion of the attachment. An example is the truck mounted hopper H best seen in FIG. 1 which may have a fixed spout 17 attached thereto or may have an elongate flexible chute 18 attached thereto and shown in FIG. 1 in dotted out-

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line. The fluent granular material flows from the box B of the truck T through the hopper H and spout 17 into the hopper portion 7 of the attachment where the sides of said hopper portion 7 direct the material directly to the material receiving portion 14 of the auger through the guarded opening 6, the auger then conveying the material upwardly through the tube 16 of elevator E to a suitable receptacle, usually some sort of storage bin.

Lift elevators, particularly of the auger type, frequently have only the lower portion of the worm or screw conveyor mechanism exposed to view, the rest being enclosed for safety's sake. This attachment of my invention substantially encloses and surrounds this normally exposed portion of the auger and the sleeve portion in combination with the guard or bar members combine to, as a practical matter, eliminate any hazard or chance of a person's hand or foot being caught in the screw conveyor. Also, the guard members prevent the delivery chute from accidentally coming in contact with the auger and sustaining damage to either the auger or the chute.

From the foregoing description, the advantages of my invention are readily apparent. The device is of simple design and construction and relatively inexpensive to make, is light in weight, and is adapted to be easily carried from place to place. By providing a suitable hopper portion in direct communication with the conveyor part of the auger, the granular material is prevented from spilling over onto the surrounding area, usually the ground in the case of agricultural grains such as wheat and the like, and thus, not only prevents contamination of the granular material but also eliminates the necessity of cleaning up the area or policing it after all of the granular material has been transferred from the delivery unit to the proper receptacle to which the lift elevator conveys it.

The unitary integral structure and lack of working parts including the absence of any clamping elements makes the attachment of my invention extremely easy to use and operate, including the attachment and detachment thereof.

The shallow, dish-like shape of the hopper portion prevents interference with the box B or truck-mounted hopper H, while at the same time providing a container of

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sufficient capacity to prevent overflowing of granular material therefrom during use, and even during momentary interruptions.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What I claim is:

In a grain auger assembly, a unitary device for directing fluent granular material to the exposed material-receiving lower end portion thereof, said device comprising an elongate cylindrical sleeve member adapted to removably and telescopically receive the exposed lower end portion of said auger, said sleeve member having substantially the upper half of the rear end portion thereof removed to form a material receiving opening in direct communication with the exposed material-receiving portion of the auger, guard means comprising a part of said device spanning said opening permitting the free passage of said material therethrough and preventing the passage of objects substantially larger than said material, the remaining semi-circular rear lower portion of said sleeve receiving and cradling therein a substantial portion of the lower half of the auger periphery, inclined side walls carried by said sleeve and connected to the marginal edges of said sleeve defining the opening therein and forming a shallow hopper portion for directing said fluent material onto the upper portion of the exposed portion of said auger, and leg means for supporting and maintaining said device with its sleeve member in an upwardly inclined position.

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